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THE

# NAVAL SERVICE

OR

# OFFIC[illegible]S' MANUAL.

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# NAVAL SERVICE

OR

# OFFICERS' MANUAL

FOR EVERY GRADE IN HIS MAJESTY'S SHIPS.

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BY

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# GUNNER.

## PRELIMINARY REMARKS.

Amongst the many anomalies which have long "held their own" in His Majesty's service, none appear to carry with it more of professional reproach, than that of conferring on an individual a *calling** which, in his own ears, must always sound like a libel. For what possibly can be more incongruous than to expect that a man totally

* Dr. Johnson's well-known joke,

"Who drives fat oxen must himself be fat,"

is not so ludicrous as the qualities tested in the appointment of a gunner. Something more analogous to the absurdity in question may be found in the fact of a man of the name of Dobbs, who, upon applying for the situation of *driver* to the Bristol mail, rested his claims on the circumstance of his being one of the fastest *walkers* in England. But, unlike the naval examiners, the commissioners were so dull as not to recognise the similitude between quick walking and quick driving.

unacquainted with the properties and power of powder,*—devoid of the slightest knowledge and practice of projectiles, and untrained in the intricacies relating to the elevation of cannon, can be competent to discharge, with any degree of efficiency, the duties delegated to the naval gunner.

It is true, that, previously to obtaining his warrant, he is compelled to pass an examination, to undergo an ordeal (any thing but *fiery*), before a tribunal officially convened, and consisting of a captain, a master, and three gunners. The president of this conclave probably directs the master to examine the candidate in *seamanship*. The master proceeds, and finds him perfectly at home at bending a buoy-rope, splicing a cable, fitting mast-head slings, or turning-in a dead-eye; and concludes his part of this important examination with a few interrogations, touching "relieving" tackles, the lead, the marks and deeps of the line.

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* "Powder when on fire occupies at least 4000 times more space than when in grains; therefore, if it be supposed that the quantity of powder with which a cannon may be charged possesses one-fourth of a cubical foot in grains, it will, when on fire, occupy the space of 1000 cubical feet." (*Bigot de Morogues.*) English gunpowder contains 74 parts of saltpetre, 15 of charcoal, and 10 of sulphur.

The senior gunner next takes the applicant in hand, and expresses himself perfectly satisfied with his *parrot* replies on the subject of 'filling' and proportioning powder.

The next examiner takes the candidate to task, and requires him to proceed in the process of securing a lower-deck gun. This, every seaman can do, whether in the King's or any other service; and, therefore, the man under examination is soon discovered to be thoroughly acquainted with this branch of the *gunner's* art.

The junior Warrant then, by way of parading his professional knowledge, desires the seaman, who probably knows more about the "winding of a call," than the windage of a shot, to reeve the purchase by which he is to get in his lower-deck guns. The *boatswain's* mate* proceeds according to custom, but, in his anxiety to go to work "ship shape and Bristol fashion," he totally forgets his '*gurnet.*' Being, however, found to be perfectly *au fait* at fitting the '*fish,*' he is permitted to pass muster.

The profession will pronounce whether this is,

* More boatswains'-mates than gunners'-mates pass for gunners.

or is not, an extravagant picture of the passing of a gunner.

The foregoing observations are by no means intended to reflect upon the gunner of the service, who frequently procures his warrant as a recompense for exemplary conduct, and sometimes for his general services in seamanship. But, though the gunner may have had little leisure or opportunity to study the science of gunnery, yet, by recent arrangements emanating from the Lords of the Admiralty, he may now acquire no inconsiderable proficiency by giving his attention to the system of instruction and experimental practice pursued on board His Majesty's ship, "Excellent," in Portsmouth harbour.

He is therefore recommended, and particularly when serving in ordinary,* to devote his leisure to the above-mentioned system of instruction, resting assured that, in this necessary pursuit of professional knowledge, he will not only find it a source of considerable amusement, but eventually a certain passport to favorable official notice.

* To encourage voluntary study, it were desirable that gunners in ordinary were excluded from keeping watch.

# GENERAL DIRECTIONS.

## MAGAZINE DUTIES.

WHENEVER the gunner may have occasion to enter the magazine he should state to the commanding officer the object of his visit; and on no account should the keys of the magazine be procured through the agency of other hands; he should therefore understand, that, for such purpose, a personal application* must be made to

* In this precaution a moral may be found, in the following melancholy occurrence, which transpired at sea, on board His Majesty's ship "D——" 74.

The gunner, a most exemplary, steady, sober, intelligent seaman, applied to the senior-lieutenant for permission to open the magazine, preparatory to "filling powder," after the officers had dined in the ward-room. The demeanour of the man accorded perfectly with his wonted propriety of conduct. The first-lieutenant was occupied at the moment the application was made, and from the

the senior lieutenant. Previously to repairing below, he should muster the magazine men on deck, for the personal inspection of the officer-of-the-watch.

STOWAGE OF POWDER.—The cases, or barrels, containing different descriptions of cartridges, should be stowed in separate racks for the purpose of facilitating a ready supply in action. This precaution may be easily taken, as the precise nature of all ammunition is marked upon the head and cover of each barrel and case.

STOWAGE OF LATEST SUPPLY.—Whenever an additional supply of powder be shipped, the gun-

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confidence he had always placed in the gunner, would, at once, have acceded to his request, had the ship's company not been ordered below to "clean for muster," the day being Sunday. But, struck by the irregularity of such an application on this day, the lieutenant declined the keys. To this refusal, the gunner made no reply, but retired below, apparently satisfied with the reason his superior had assigned for refusing to fill on that day "the portion of powder" the gunner had reported "as requisite for ready use." An hour had hardly elapsed, when the poor man, whose general qualities entitled him to esteem, (for the author had sailed with him in the same ship, and knew well his worth,) was discovered in his cabin with his throat nearly severed. The wound was instantly stitched together, but the unfortunate man recovered only to repeat more effectually the suicidal deed in Hazlar Hospital.

What can be inferred from this? The man was undoubtedly deranged; and the sagacious caution of the lieutenant possibly saved the ship, and the lives of all on board.

ner should take the precaution to place such supplies on racks, purposely appropriated to the "Latest Supply." By such arrangement, no possible mistake can occur, nor can any excuse be permitted for that reprehensible practice of using new powder before the old is "expended."

MAGAZINE TOOLS.—The gunner is not to permit the magazine men to use any other tool than the wooden setter, for starting the copper hoops of the powder barrels. The application of the gun-metal adze is a practice attended with considerable danger; it being on record, that strong sparks have been produced by the stroke of a metal adze against a metal setter, or a copper hoop.

MAGAZINE PREPARATORY TO ACTION.—When the magazine be opened, preparatory to action, the gunner should immediately "ease the screws" which confine the cartridges in their cases. By this precaution, and removing the lids as required, powder may be as readily supplied as if the cartridges were regularly laid upon racks.

MAGAZINE PASSAGES TO BE SWABBED.—Upon every occasion that the gunner be employed in the magazine, he should, upon closing and se-

curing the door, direct that the different passages leading to the light-room and magazine be swabbed with half-wetted swabs.

## SIGHTS.

ALL "sights" entrusted to the gunner's charge are to be affixed to the guns, conformable to the instructions he will receive, on application at the gun-wharf.

When fixed to the guns, the sights are to be shifted as seldom as possible; and when covers are supplied, they are to be kept always on, except when in actual use. The gunner should also take every precaution that the sights be not displaced, or disturbed in their line of direction, by pressure, or aught of violent collision with oars, spare spars, or running ropes. In order that the sights may be kept ready for service, the gunner should cause their joints to be oiled, at least, twice a week.

## GUNS KEPT DRY, AND FREE FROM RUST.

THE ordnance should be kept as dry as possible. The prevalent practice of washing the guns every morning is at once prejudicial to both cordage and cannon. The gunner is strictly enjoined to keep

the bores and vents of the guns free from rust, and to be careful that the latter be always clear.

## INSPECTION OF GUNS—SMALL ARMS.

THE gunner should frequently examine the state of the guns, locks, carriages, and carronade-slides, in order that such as may be found defective may be immediately repaired, or replaced. He should also inspect, as often as possible, the condition of the musketry and *spare* small-arms confided to his charge; and see that they be kept clean, and, in every respect, fit for service.

## LIGHTED-MATCHES.

HE is never to allow any match to be burnt in the day, nor more than two lengths at the same time in the night, without the special direction of the captain. When the match is kept burning for ready use, precaution should be taken to place it in its proper tub, hanging over a proportion of water. The charge of the burning match should be given to the gunner's mate-of-the-watch.*

* Negligence on the part of the gunner of the "D—m—d" frigate, in the early part of the late war, was nearly the cause of the ship's destruction by fire. A match, which was supposed to

## SALUTES.

To insure the certainty of the saluting-guns being all unshotted, the cartridge should be drawn as well as the shot; for, as it has been well observed, "a gun may be loaded with two shot, and only *one* may be drawn." Precaution should also be taken to point and elevate the guns in a position such as to prevent the possibility of doing damage, should, from any unfortunate neglect, a shot be fired from any of the guns selected for salute.* The gunner should have two or three extra guns ready, to supply the place of such as may happen to "hang fire."

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have been extinguished, was taken down with others to the gunner's store-room; the consequence was, that about, two hours subsequently to the removal of the match, the ship was in flames below. Six inches at least of every match that has been used in an ignited state, should be *cut off from* the burnt end, even though precaution has been taken to insert it in water.

* "Sentinels," says a professional writer, "should be placed over the guns till the salute is fired." The same writer says he "has seen *five* shot fired from *one* vessel, one of which cut the *Victory's* main stay."

The necessity of these cautions is rendered painfully obvious by the accident which recently occurred in a French port, during the salute of an American vessel-of-war, when, in consequence of the almost culpable neglect of the gunner, in omitting to draw the guns, several men in the neighbouring vessels were killed and wounded.

## REPORT DAILY DUTY.

THE gunner should make a return to the senior lieutenant of the daily-duty performed, when, at the same time, he should submit to his superior a "statement of the work to be performed on the ensuing day."

# FIRST COMMISSIONING.

## FITTING THE MAGAZINE.

When the ship is "in the hands" of the dock-yard artificers, the gunner should inspect the established fashion of fitting the magazines, and report to the captain, or commanding officer, any plan which may strike him as tending to facilitate stowage, or to prevent confusion in the important particular of supplying powder in time of *action*. Labels properly placed will essentially contribute to order and *despatch*. Such labels as "*Ready use*"—"*Last supply*"—"*Lower-deck*"—"*Middle-deck*"—"*Main-deck*" *&c.*, according to the deck the magazine is intended to supply, should be legibly painted over each rack.

CLEARING AND AIRING MAGAZINES.—When the magazines are reported "out of progress," or as finished by the artificers of the yard, the gunner, in conjunction with the carpenter, should carefully inspect the state and condition of each. He should also see that they be perfectly dry, free of shavings and saw-dust, and thoroughly swept, ready for the reception of powder. Should the slightest appearance of damp be detected, the circumstance should immediately be made known to the captain or commanding officer, who will order stoves below to remedy the evil.

## FITTING RIGGING AFLOAT.

SUCH of the gunner's geer and rigging which required to be fitted afloat should be specifically assigned to *one* watch of his crew. The practice of working one day on *shore* and one day afloat is never attended with beneficial effects. When two parties take it in turn to execute any particular service, it is seldom neatly or efficiently put out of hand. Both parties disown the errors of each, and neither considers himself responsible for the blunders or careless execution of the other.

RIGGING MAIN-MAST AND MAIN-YARD.—In

the execution of these duties the gunner is referred to the "directions addressed to the boatswain," under the head of "Placing and setting up rigging" —"Mast-head slings"—"Futtock-staves," &c.

FITTING THE FISH GEER.—The gunner should consult the master and senior lieutenant as to the fitting of this geer. In few ships is the fish-fall fairly led.*

## GUN-WHARF DUTIES.

THE gunner should daily devote a considerable portion of his time to these duties.

He should make an early application for a "gun-wharf party;" and, in addition to one watch of his own crew, request from the senior lieutenant two† seamen from each department of the ship;

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* A professional writer justly observes, that "the strap of the block at the davit-end is generally too short; from this circumstance the shell of the block binds against the davit, by which the fall does not lead fair upon the inner sheave, which is thereby rendered nearly useless. Of consequence, more strength is necessary to fish the anchor than would be were the strap *just* long enough to allow the block to play free of the davit."—*Griffiths's "Points of Seamanship."*

† This number should be increased in a ratio proportionate with the size of the ship, or complement of men. The above number will suffice for a frigate; in ships of the line, two additional seamen may be allowed for every deck.

the whole to be under the direction of a steady, and, if possible, a passed midshipman.

FITTING BREECHINGS AND TACKLES.—In assigning to the gun-wharf party divisional duties, care should be taken that the people appointed to fit breechings and strop blocks be selected from the best and most experienced seamen of the "gunner's gang." The "gun-tackle party" should be warned of the necessity of thoroughly stretching the strops preparatory to "turning-in" and "heaving-to" the blocks.

## SHACKLE-BREECHING.

IF it be required to fit the breechings upon this recently improved plan,* it will be necessary to taper and point *both* ends of the rope preparatory to turning-in a shackle on each extremity. The shackle should be turned-in and secured to each end of the breeching by two separate seizings, one close to the shackle, and the other towards the pointed end of the rope.

* By this simple and serviceable method, the breeching may be shifted in a few seconds, it being no longer necessary to reeve it through the ring at the breech. An opening is now made in the cascabel, which admits the introduction of the breeching on the bite; in some cases, the cascabel is fitted with a hinge or "snatch," which, when closed, confines the breeching, and prevents it jumping out on the recoil of the gun.

## GUN CARRIAGES.

As soon as the gun carriages and carronade slides are selected for the ship, the gunner is cautioned to inspect them severally with a close and scrutinizing eye, and see that each be perfectly sound and fit for service. In this inspection, he is particularly recommended to examine the axletrees and inner sides of the carriages, in order that he may satisfy himself that they are in no way tainted or diseased with the dry rot. The most simple method to detect disease in the wood of which the carriage is composed, is by hitting the *heads* of the confining bolts with a stout maul. The gunner is also cautioned* to inspect closely the trucks, traversing-rollers, pins, and fore-locks, pertaining to each gun-carriage and carronade slide.

## GAUGING SHOT—EFFECTS OF WINDAGE.

The shipment of shot is too often attended by injurious haste; and the *windage*† of shot is not

* These precautions become the more necessary on the part of the gunner, when he bears in mind, that, by King's regulations, he is directed, on "the delivery of stores, to give to the store-keeper of the Ordnance a certificate specifying that every thing has been *delivered* to him in *complete* and good order."

† The windage is the difference between the diameter of the shot and the calibre of the gun.

sufficiently studied in the naval service. The prejudicial effects which windage has upon accuracy, arises from the reflections* of the ball passing along the bore. These will manifestly be greater in proportion as the difference between the diameter of the shot and the calibre of the gun increases.

If time permit—though, in this particular, time should be a secondary thought, compared with the importance of such precautions—the gunner should see passed through the proper gauge, all shot which may seem unusually encrusted with rust. He will be also required to keep separate the "different sorts."

## PREPARATIONS FOR GETTING IN THE GUNS.

WHEN the gun-geer for "*ready use*" is perfectly fitted, the gunner should report the circumstances

* From these reflections, "a shot acquires a sort of zig-zag motion, and does not generally quit the cylinder in the direction of its *axis*. If the last bound be upon the *lower* part of the bore, the angle of the shot's departure will be increased; if *above*, diminished. These affect the length of range. If the last reflection be on either side of the bore, the line" (direction) "will be altered; and, in every case, the friction arising from these rubs will give the ball an irregular whirling motion, productive of great inequality of resistance from the air, unless the rotation be at right angles to the direction of the projectile's flight."—*Naval Gunnery*.

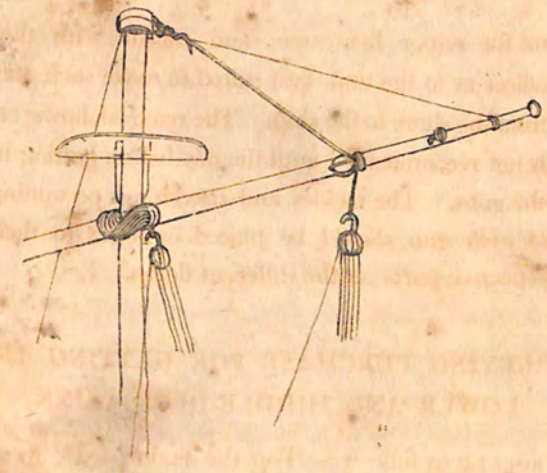
to the senior lieutenant, and consult with that officer as to the time best suited to move such geer from the shore to the ship. The removal, however, is not recommended until the day before getting in the guns. The tackles and breechings pertaining to each gun should be placed opposite to their respective ports on the different decks.

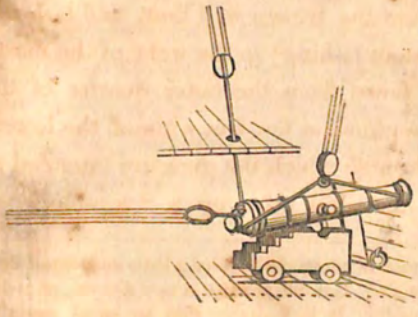
## REEVING PURCHASE FOR GETTING IN LOWER AND MIDDLE-DECK GUNS.

Proceed as follows:—Top the main-yard* up at an angle of fifteen or twenty degrees above the horizon; bouse the trusses well taut, and lash the yard with a stout lashing† in the wake of the mast; send a whip down from the outer quarter of the yard, so as to plumb a few feet without the lower-deck port, through which the guns are intended to enter. By this whip trace up a "top-block" to

* The main-yard is sometimes lowered a little and topped up at a considerable angle. But this practice is now disused, as giving unnecessary trouble. It is desirable that an equal strain be brought upon the lift, top-sail-sheet, and burton. The practice, however, of frapping them together is not recommended.

† In securing the main-yard to the mast, care must be taken that the lashing be passed in a manner to meet the strain and pressure which the weight of the gun will necessarily bring upon the lower or under turns.





N.B. In the above sketch it will be seen that the frapping turns round the slings of the gun have escaped the notice of the Engraver.

the quarter of the yard, placing the hook in the direction of the yard-arm, and lashing it well with a stout lashing passed with crossing turns both round the hook and the yard. Through the top-block reeve the pointed end of the top-tackle pendant, taking it over the cap between the lower-mast-head and the heel of the top-mast, and securing it with two half-hitches, and a seizing on its own part. Whip next up, and hook to the thimble in the pendant, a top-tackle-fall block, through which, and a lower block of the same description, reeve the *purchase*, clinching the standing part round the main-yard, close to the lashing of the top-block.

When rove, point the purchase-fall through a leading block on the break of the quarter-deck, and again through snatch-blocks hooked to the Sampson's-post on each side abaft. This mode of leading the fall will allow it being worked on both sides of the quarter-deck, as well as on the opposite gang-way.

Inside the *purchase*, and well *in* with the quarter-block, clap round the yard a stout strap or salvagee, placed in a position to plumb the hole bored in the deck for the gurnet-pendant. To this strap or

salvagee, hook the quarter-tackle, the lower block of which hook to the thimble of the gurnet-pendant.

The gurnet-pendant should be sufficiently long when passed through the holes bored in the different decks, to reach a few feet without the cell of the lower-deck port, through which the guns are to enter. The holes for the gurnet should be bored in a line leading to the centre of the receiving port.

HOISTING-IN.—When the gun is slung, hooked, and walked sufficiently high to enter the port, a thwartships-tackle, worked within on the lower-deck, in a position abreast of the port, is to be hooked to a small strap attached to the breech ring at the same time of hooking the gurnet.

CAUTION.—When the gurnet purchase is raising the breech to the level required to place the gun in its carriage, care must be taken that the main-purchase be *not* lowered by a *turn*, but that the men on the fall *walk back* with a steady step.

When the gun is lodged in its carriage, it is removed to its proper port, and *another* carriage is rolled to the receiving port, ready for the reception of the next piece.

MAIN-DECK GUNS are generally got in "over all." A top-tackle pendant, secured round the head of the lower-rigging, led down between the trestle-trees in the direction of the mast-head-slings, and a top-tackle hooked in the thimble of the pendant, is sometimes, and with much propriety, substituted for the common stay-tackle purchase.

## CARRONADES—LONG & SHORT BOLTS.

IN shifting these bolts, considerable time is lost by the seaman, who is stationed to perform this duty, not knowing the precise position to place the slide. It not infrequently happens that the trainers are for several minutes training forward and training aft, before the man holding the bolt in his hand can enter the instrument. To insure certain celerity in the execution of this service, it is recommended to paint marks that will indicate the exact position to which the slide should be moved.

Both bolts should be fitted with a light nettle laniard, secured to the head of each, in order to facilitate* its movement in lifting it from the socket.

* Many nails and fingers have been injured in this operation.

## SHIPMENT OF SMALL ARMS, AND ARTILLERY STORES.

THE pell-mell system of loading lighters,* or of "bundling into boats" warrant-officers' stores, for the purpose of conveying them from the shore to the ship, is a custom for which even the often misapplied pretext of "*despatch*" (query *delay*) can offer no plausible excuse. Nor is the practice of shipping stores, regardless of all preparation afloat, the less reprehensible. The gunner is therefore enjoined to consult the senior lieutenant as to the *precise period* at which that officer may deem it desirable to receive from the arsenal the small arms, artillery stores, and accoutrements allowed to the ship.

The arms should be passed below, and placed in their respective stands in the store-room, and not permitted to be heaped in piles on the lower-

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* It would materially tend to promote despatch, as well as to insure order and regularity in the stowage of stores, if each warrant-officer were allowed a *separate* day to draw and ship his supplies.

How often cartouch-boxes, belts, bayonet-sheaths, sword-scabbards, boarding-pikes, &c., have been seen heaped in the most disorderly state in the hold of an arsenal lighter.

deck. The boarding pikes* and cutlasses should be becketed by people appointed for the purpose.

TRANSPORTING SIGHTS.—Should these instruments not be conveyed to the ship in the Arsenal lighter, it is recommended to intrust their transit to a steady midshipman, the armourer, his mate, a corporal, and a couple of marines.

HINT.—The sights should *not* be shipped, but kept in some place of security till the dock-yard artificers have left the ship.

SPONGE CAPS.—The sponge caps should be painted black, and marked with white numbers. The paint should be permitted to harden on shore before the caps be removed to the ship.

APRONS FOR THE LOCKS.—The gunner is recommended to fit to one part of the laniard attached to the apron of the lock, a copper thimble. This mode of fitting the laniard will insure the apron being cast off and disengaged from the gun with certain celerity, and will prevent the knife being so often called into play.

* The *points* of the boarders' pikes should be covered with a *cap*. A slung musket-ball, with a hole drilled in it to receive the point of the pike, and attached to the staff by a piece of white-line, will serve every purpose of a cap. When the boarders are exercised, caps on the points of the pikes prevent accidental wounds.

CHISSELS, MALLETS, AND MARLINE-SPIKES.—A chissel and mallet, attached to each other by a light laniard, should be placed between every two guns on each side of the different decks. A proportionate number of marline spikes should be also allotted to each division of quarters.

FIRE-BUCKETS.—To each fire-bucket should be attached a small hand-swab and regular length of laniard,—the swab to be placed in the bottom of the bucket, the laniard to be made of sinnet* and secured to the handle. The fitting of these buckets should be entrusted to the day-mates, and should be all complete before the people shift from the hulk to the ship.

POWDER BOXES.—It has long been a practice in the service to secure the tops of the powder-boxes with white marline. Nothing can be worse. In time of action this line is liable to become besmeared with both blood and powder, and therefore to be an ugly evidence; but as, worse than this, it is in danger of taking fire, and so might be handed down to the magazine in the shape of a

* Sinnet is best suited to this purpose; small rope is too easily converted into laniards and lashings for hammocks.

quick-match, it is more advisable that the tops of these boxes be fitted with leathern thongs.

TUBE-BOXES. — The tube-boxes appropriated to the guns of the different decks should be severally numbered, in white figures, on the front of the box, such as No. 1, M$^{n}$ D., No. 2, L$^{r}$ D., &c.

In ships of the line the tube boxes should be placed over the beams in the cabin, ward-room, and gun-room. Pigeon-hole fashion, with a falling front, appears to be the best mode to secure the boxes to the beams. This method of placing the boxes renders the tubes* less liable to dampness and damage.

FIGHTING LANTERNS.—The fighting lanterns should be placed in their respective buckets, and suspended over each port on the line of battery of each deck. Buckets and lanterns should be marked

* With tubes of uncertain, or sluggish action, it is useless to expect accuracy in firing, even with the best trained men; "for suppose a vessel in action be rolling eight degrees, performing each roll in about four seconds of time; when the nature and condition of the tube and priming is defective, or bad, it will very frequently happen that an interval of *one* second of time, and sometimes considerably more, will take place between the pulling of the trigger-line and the discharge of the piece, and in that time the *elevation* of the gun would alter *two* degrees."—*Naval Gunnery*, p. 2, 3.

and numbered according to the deck and gun to which they severally pertain.

BLUE-LIGHTS & ROCKETS.—A sufficient number of blue-lights and rockets, for signal purposes, should be placed between the beams over-head in the captain's cabin; the remaining supply should be stowed in the magazines in their respective boxes.

## MAKING WADS.

MUCH of time and trouble will be spared the gunner by the introduction of the grummet wad.* He should, however, not neglect to prepare for the "sea charge" a necessary proportion of round wads; nor should he postpone fitting laniards to those intended to be attached to the tompkins in use.

* There can be no question, that for *actual* service the "grummet wad" possesses many advantages over the round one, particularly as experiment has proved that wads do not prevent the escape of inflammable powder by the windage, nor under any circumstances occasion any sensible difference in the velocity of the ball. "This," observes the author of 'Naval Gupnery,' "being clearly established, *tight* wads should not be used in *action*, because they increase the difficulty of loading, without doing any good. They may be used before an affair; but, with a view to *quick* firing, the wads used in action should be no *tighter* than is necessary to prevent the charge from shifting when the gun is run out." But in this recommendation Sir Howard might have cautioned the loader as to the manner of entering the wad in the gun: unless the *grummet*-wad be inserted in the piece with the cross bars outermost, the wad, in all probability, will *jamb* in the cylinder.

## GENERAL INSPECTION OF GUN-GEER.

PREVIOUSLY to the final removal from the "hulk to the ship," the gunner should remind the senior lieutenant of the necessity* of inspecting all the gun-geer and implements required for effective service, through the medium of a general muster at quarters.

On this occasion, the sights, together with their covers, should be affixed to the guns, and the ridge-ropes rove and set-up fore-and-aft on the different decks.

## PREPARATIONS FOR RECEIVING POWDER.

WHEN it is officially intimated to the Ordnance store-keeper that "the ship is ready to receive her supply of powder," the gunner will be required to ascertain, at the store-keeper's office, the exact hour, and particularly the time of *tide*, the powder-hoy will be directed to depart the wharf. When this is ascertained and reported to the senior lieu-

* The necessity of this practice must be manifest to every officer who has experienced the annoying cry of "missing" or "misplaced."

tenant, that officer will caution the signal midshipman to keep a watchful eye on the mouth of the harbour, in order that timely notice may be given of the powder-hoy's* approach to the ship.

Independently of the report of the master-at-arms, the gunner should personally inspect the galley grates, and satisfy himself that every spark be extinct before the powder-vessel be permitted to come along-side. The same injunctions,† touching magazine-men and half-wetted swabs, are to be observed, as already mentioned, under the head of *General Directions.*

## INDENTING.‡

THIS duty is too often delayed. Ships before now have been *prevented* putting to sea in consequence

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* The powder-hoy invariably carries a distinguishing flag.

† "The utmost care must be taken of the metal-line barrels in which the powder is packed. These should be brought under the ports abreast of the hatchway nearest to the magazine which is to receive them. Either dry swabs, mats, or cushions, made of bread bags, stuffed with oakum, should be prepared, and the packages landed thereon; thus preventing their being injured, which happens when they are heavily lowered on the decks. These packages are to be carefully removed to the magazine, and never to be tumbled or rolled along the decks."—*Naval Instructions.*

‡ "The indents supply accounts must be carefully examined, in order to ascertain, before the ship leaves the port, that every article inserted therein has been actually received; and it is to

of warrant-officers leaving this service to the last. The gunner should be prepared to perform this duty the moment the powder is shipped.

## SCALING GUNS.

THE guns are to be scaled before they are loaded for service.—Vide *Regulations.*

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be understood, that if any of the boats' oars, or other stores allowed for harbour-service, be taken to *sea*, the value of the same will be charged against the warrant-officer's pay."—*Naval Instructions.*

## WEIGHT OF GUNS AND CARRIAGES.

| Pounders. | Weight of Guns. | | | Weight of Carriages. | | | Total. | | |
|---|---|---|---|---|---|---|---|---|---|
| | *Cwt.* | *qrs.* | *lbs.* | *Cwt.* | *qrs.* | *lbs.* | *Cwt.* | *qrs.* | *lbs.* |
| 6 | 20 | 1 | 0 | 2 | 3 | 24 | 23 | 0 | 24 |
| 9 | 25 | 2 | 10 | 3 | 3 | 0 | 29 | 1 | 10 |
| 12 | 32 | 0 | 0 | 4 | 3 | 0 | 36 | 3 | 0 |
| 18 | 36 | 0 | 0 | 5 | 2 | 0 | 41 | 2 | 0 |
| 24 | 47 | 2 | 0 | 6 | 3 | 0 | 54 | 1 | 0 |
| 32 | 49 | 0 | 0 | 8 | 0 | 0 | 57 | 0 | 0 |
| 32 | 54 | 2 | 0 | 8 | 2 | 0 | 63 | 0 | 0 |
| 32 | 63 | 0 | 0 | 9 | 1 | 0 | 72 | 0 | 0 |
| WEIGHT OF CARRONADES AND SLIDES. | | | | | | | | | |
| 12 | 6 | 1 | 0 | 3 | 0 | 0 | 9 | 1 | 0 |
| 18 | 10 | 1 | 0 | 4 | 1 | 14 | 14 | 2 | 14 |
| 24 | 13 | 1 | 20 | 5 | 2 | 0 | 18 | 3 | 20 |
| 32 | 17 | 3 | 0 | 6 | 2 | 14 | 24 | 1 | 14 |
| 42 | 22 | 3 | 0 | 7 | 2 | 0 | 30 | 1 | 0 |
| 68 | 36 | 0 | 0 | 10 | 0 | 0 | 46 | 0 | 0 |
| GUN-CARRONADE. | | | | | | | | | |
| 68 | 50 | 2 | 0 | 9 | 3 | 20 | 61 | 1 | 20 |

# IN PORT.

## GUNS UNSHOTTED.

GUNS should never be kept *shotted* in port. Though the practice of drawing the shot from guns previously to entering port is generally observed in the service, the gunner should bear in recollection, that instances stand on record in which serious accidents have occurred from ships neglecting to adhere to this caution.*

* The author recollects an instance in which an accidental shot levelled a stack of chimneys in the vicinity of the Cove of Cork; a spark from the armourer's forge, which was at work in the waste, was said to be the cause of the gun's discharge.

Luckily, the proprietor of the premises did not regard the accident in the light of an injury. In Ireland, doors and windows are frequently considered as legitimate channels for the egress of smoke. The captain of the ship immediately sent artificers to repair the damage done, an act considered on the part of the tenant

## RUNNING IN AND OUT LOWER-DECK GUNS.

When the service and the weather will admit, the morning and evening-movements of "running-out, and in," the lower-deck guns should be strictly observed. By this practice the men become acquainted with the weight of the gun, and expert in disengaging and securing its geer. Preparatory to "running out," the gunner should ascertain, from the senior lieutenant, whether it be required to make the movement.

## TRUCKS TAKEN OFF.

"The dirt which unavoidably collects, from bad weather, wet, &c., about the axle-trees and trucks of the guns on the upper-decks of all ships, and particularly in flush-deck vessels, is very great. Although they are swabbed and swept, yet it seldom happens that the trucks are taken off to clean—a precau-

a "great honour and condescension," and, in reply to the captain's message, begged that the bearer might tell his honour, "that his honour was too dacent intirely;" adding, "and it isn't his honour that need be unasey atall, atall, for that the smoke oft'ner *wint out* o' the *dour* than *up* the chimbly." Mr. Bull would have acted very differently, and talked about "damages," and "the law."

tion which is strongly recommended to be attended to."*

CAUTION—Trucks should never be scraped.

## SPARE BREECHINGS.

WHEN breechings are "condemned," or returned as defective, the gunner should be careful to reeve the spare ones, supplying the place of the latter with the "*last drawn*," so as always to keep the *newest* rope in reserve. Spare breechings should be stopped in round coils, and traced-up to small staples inserted in the deck, immediately over the breech of the gun.

## CLEANING ARMS.

IT frequently happens that this duty, which is so sedulously observed at sea, is totally neglected in port. This is ascribed to the intervention of dock-yard and other unavoidable duties. The fault will fall upon the gunner if arms be permitted to rust in port. Half an hour can always be devoted twice in the week.

* It is recommended to keep traced up over head upon the several decks a few spare trucks.

## PROFESSIONAL INSTRUCTION.

WHEN the services of the gunner can be spared, and when the ship be not immediately "fitting," the gunner is strongly recommended to obtain, as often as possible, the commanding-officer's permission to visit the "Excellent," or such other ship as may be selected in the port, for the purpose of giving instruction, and affording facilities for practice, in the important art of gunnery.

In order that no improper use may be made of the leave of absence granted under this plea, the applicant should be compelled to bring back with him, from the commanding officer of the ship of instruction, a certificate of his presence there, and of his attention to those subjects of science taught in the vessel.

# AT SEA.

## DAILY INSPECTIONS.

MORNING.—The gunner should closely inspect the guns on the different decks, the geer, and rigging of the main-mast* and main-yard, and report severally their state and condition to the officer of the morning-watch.

EVENING.—He should see that the passages leading to each magazine be free from obstruction, and perfectly clear for passing powder; that the spare gun geer, furniture, and implements under his charge, be all at hand, and ready for immediate use.

* In this inspection, attention is particularly directed to eyes of the lower-rigging, mast-head-slings, cat-harpen legs, trusses, lifts, quarter-blocks, and running geer of the main-sail. Nor should the laniards of the lower-rigging be forgotten.

He should also see that the *life-buoy* attached to the stern be primed, cocked, and fit for service; and that the relieving-tackles (should the top-sails be treble-reefed) be placed in the gun-room, preparatory to hooking.

Upon the completion of these several inspections, he should report accordingly to the senior lieutenant, "at quarters."

## PERIODICAL INSPECTION OF SHOT.

THE inconsiderate practice of permitting shot to remain for months and months unexamined in the lower lockers, is one which in time of need may be productive of irreparable mischief. The lockers should be cleared at least once in a quarterly cruise; the shot cleansed of rust, and "each nature" passed through their respective gauges, before they be returned below.*

## FIRE-SCREENS—GENERAL EXERCISE.

WHEN the ship is at sea, the fire-screens are to be fixed, rolled up, and protected from the weather.

* When clearing for action, it should be impressed on the minds of the men, that the shot from the *lower* lockers be not used until those in the racks and combings on deck be expended.

When general exercise is ordered, and powder not used, *wads*, of the proper calibre, are to be handed up in boxes, instead of cartridges, for the several guns; and the magazine-men, each time, should place a separate wad in the box, in order to exercise the powder-man in affording a ready supply.

## DOUBLE BREECHING LOWER-DECK GUNS.

In blowing weather with a heavy sea, or even in calm accompanied by a heavy swell, the gunner is cautioned to examine carefully the "working of the lower-deck guns."* Should the ship labour, or the guns be found to "give" on one movement, or to strain on the other, the circumstance should be immediately made known to the officer-of-the-watch, in order that prompt measures may be taken to double-breech, or rather "frap-in" with the stream-

* If the ship be lying-to, it is strongly recommended to hook the sea-relieving tackles, and bouse them as taut as possible, in order that the pressure which the strain of the muzzle-lashing brings upon the ship's side, may, if possible, be eased. In every violent lee-lurch, the side has to resist an inconceivable strain, which becomes more powerful from its simultaneous action. Cleating should never be resorted to—it produces the very effect which it is desirable to counteract. Wedges may be put under the fore-trucks on the lee side, and under the after-trucks on the weather side.

cable, the spare messenger, or hawser, suited to the purpose. The spare messenger will answer for one side of the lower-deck, should the stream-cable be found too unwieldy to work on each side.*

* Every seaman must be sensible of the danger resulting from the breaking adrift of a gun in a gale of wind. In two instances this accident has been witnessed by the author of these pages. The first was in a frigate, during a gale of wind, in the Bay of Biscay. In consequence of having previously split the main-top-sail, the frigate, being deprived of the necessary lofty canvas to steady the ship, became extremely uneasy, and laboured much. The gunner had neglected to examine the condition of the guns; and just as the officer-of-the-watch had despatched a messenger, directing the former to inspect and report their state of security, the weather-gun abreast of the fore-hatchway drew both breeching bolts, broke away from the tackles, and eventually, after several "sends" between the ship's sides and the combing of the hatchway, by one of which the gunner's mate-of-the-watch lost his leg, and ultimately his life, descended the fore hold, crushing a couple of water butts in the ground tier.

The second instance occurred on board a ship of the line, scudding in a heavy gale of wind, homeward bound from Jamaica. The ship was a fast sailer, and, like most fast sailers, a "heavy roller." The preparatory 'pipe' of "Stand by hammocks!" had hardly escaped the lips of the boatswain, when the second-master, rapidly ascending the quarter-deck ladder, motioned to the first-lieutenant to stop the movement, exclaiming, "A lower-deck gun adrift, Sir! Let me have two or three hammocks, and I'll endeavour to choke the trucks." The hammocks were hastily thrown down the hatchways, when, after a heavy lurch had with fearful force propelled the gun back to its proper port, the second-master succeeded in choking the after-trucks, and the ship was immediately brought to the wind on that tack which left the unsecured gun on the *lee* side. Had it not been for the presence of mind and activity of this officer, the ship must have suffered most serious, if not fatal, injuries.

## SHOT LOOSE IN THE GUN.

It not unfrequently happens that, during a heavy gale, or heavy swell, the rolling motion of the ship causes the shot to loosen in the gun. This is attended with danger, and, therefore, whenever the ship be rolling heavily, the gunner is cautioned to inspect closely the shot in the guns. If a shot be loose in a lower-deck gun, and it be not deemed desirable to cast loose the muzzle-lashing of the gun to "re-ram" the charge, the best method the gunner can pursue, to prevent explosion from the friction of the shot, will be to pour into the vent-hole about a pint of vinegar.

## CLEARING FOR ACTION.

If time will admit, it is desirable that the gunner should go round the several decks, in order that he may see that the implements are properly placed, and the geer in readiness at every gun. He should also be satisfied that the fire-screens be well wetted before he attempts to open the magazine; and that all the passages, through which powder may be passed, or conveyed upon deck, be properly moistened by the application of half-wetted swabs.

RE-LOADING THE GUNS.—In every instance of bringing an enemy to action, and particularly when not pressed for time, it is recommended to re-load the guns. "Remember the adage," says the author* of this recommendation, "The first broad-side is half the battle."

## GOING INTO PORT.

HINTS—Present-use Demands to be made out and signed by the captain—Demands to complete—If annual accounts are due, apply for survey on remains—Demand for powder—Unshot guns—Bend buoy-ropes.

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IN concluding this chapter, it may be necessary to state, that the reason the "GREAT-GUN EXERCISE" does not appear in the pages of this work, is solely from the prevailing opinion in the profession that the present Exercise will be considerably abridged and amended in the forthcoming revision of the "PRINTED INSTRUCTIONS."

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* Captain A. Griffiths.

# PRACTICAL HINTS.

## INSTRUCTION TO SEAMEN.

BEFORE technical phraseology be taught to the seaman, it is desirable he should be made acquainted with the cause and origin of the cannon's form. He should know the reason why the *metal* of the piece is not equally *thick* in all its parts; that, to reduce its weight, the gun is made to taper gradually towards the muzzle; that at the breech, where the effort of the powder is strongest, the thickness of the metal is greatest; that at this part (the breech) the thickness is equal to the diameter of the corresponding shot; that at the first reinforce, where there is less to resist than at the breech, there is less thickness; that at the second ring, where the force is still further diminished, the

thickness is still more reduced; that at the chace, the solidity of the metal is not equal to that at the second "reinforce;" and that, finally, from the trunnions to the muzzle, the piece gradually lessens in thickness, and consequently tapers in form.

This is all plain sailing; and were this system of instruction more generally adopted, and made more familiar to the men through the medium of apt and intelligible terms, they would soon see the cause why it is that a line drawn from any part of the breech to the muzzle can never become *parallel* to the line of *bore*. Seamen have an unconquerable aversion to all terms of art which convey not a definite and distinctive meaning; and therefore it is, that in every system of instruction intended for the sailor, propriety of phrase should be strictly observed.

In the art of gunnery, the words "*centre* of metal," and "*line of* metal," are employed as terms of *contradistinction*. Possibly these terms have too long received the sanction of *usage* to be now altered; but to prevent that mystification which will arise in the mind of the uneducated seaman, care should be taken to explain to him that the term "centre of metal" is not applied to

that part of the gun which the sailor would very naturally designate the "*midships*," or spot at which the piece might be poised. This caution becomes the more necessary, because the instructor means, by the term "*centre* of metal," a *line* corresponding with the centre of "the bore," and which line is totally different from that designated the "line of metal."*

## DISPART.

THE dispart, being a piece of metal, placed on the gun to give a line of sight parallel to the centre of the bore, may be placed at will on any part of the top of the gun.

To find the dispart, the following will be found the shortest rule :—Take the diameter of the base-ring, and the diameter of that part of the gun

* In these *metallic* terms, the author, on one occasion, witnessed a little ludicrous confusion in the mind of an untutored top-man, who thus muttered to himself:—"How can this be? centre of metal!—in course he must mean the middle of the piece; because, if there is to be a line o' metal, and a *centre* o' metal, one must sartainly mean a *line*, and the tother as sartainly mean a *centre!* or wherever's the use of words, or of giving to things a name as is never intended to go for *nothin'*? But now, I finds, I must convart the *centre* o' metal into *another* line, though there's a *line* o' metal so *called* afore. I'm blest if the whole bisness isn't a reglar-built pauler!—*line* o' metal! *centre* o' metal! !—and. arter all, the gun's no more nor a mass o' metal from clue to earing!"

where it be desired to place the dispart; take then the difference, and half that difference will be the height of the dispart to be placed on the gun where the lesser diameter was taken.

## ILLUSTRATIVE FIGURES.

SKETCH 1, represents the range of a shot when propelled from a gun elevated at two degrees. The upper line is intended to shew the direction the shot would take if uninfluenced in its flight by the force of gravity* and resistance of the air.†

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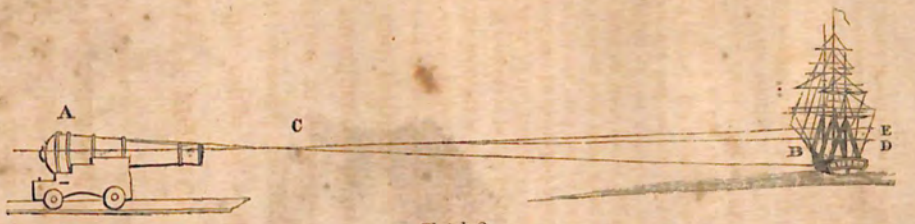
* Gravity is the tendency which all bodies have to fall downwards, and acts upon the shot the moment it is fired.

† "To explain the nature of resistance to the flight of shot and shells, it must be remarked, that, in the motion of a ball through the air, no particle of that fluid can be disturbed without moving at the same time a great many others, and not in one direction, but according to that of their contact with those from which their impulse is received. As the moving body passes on, there is left behind a kind of vacuum, more or less complete, according to the degree of velocity. When the ball moves quicker than the air can rush into the space left behind, the vacuum becomes complete. Now there is a certain limit to the velocity with which air can rush into a vacuum,—viz., about 1300 or 1400 feet in a second; and consequently, when the velocity of the ball is greater than this, it is manifest that the resistance must be much increased; for there being then no pressure of the fluid behind the ball, it will have to support the whole weight of a column of the air on its fore part, as well as to give motion to the particles which it strikes; and the air which is before it will be in a very condensed state.

"The effect of resistance is so various according to the velocity,

*Sketch* 1.




*Sketch* 2.

But as the two latter are known to produce a counteracting effect on the shot's course, the curved line will be the *true* direction of the shot at this elevation.

SKETCH 2, is intended to demonstrate the error of taking aim by "line of metal" when the object is at point-blank distance; for, the breech being larger than the muzzle of the gun, it becomes necessary to *lower* the former, and to *raise* the latter, in order to get the notch at the top of the base ring, with that at the muzzle, in one point with the object. This movement, consequently, elevates the gun's axis or line of bore.

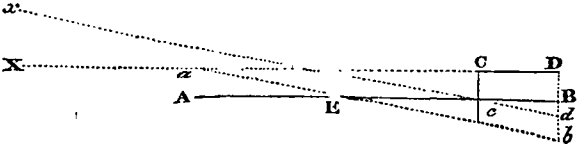
From *A*, at the breech, prolonged to *B*, the vessel's hull, is then the line of sight by "line of metal." The marksman following this aim *imagines* his shot will strike the ship at her water line, *B*. The line *C E*, shews the direction of the shot from the axis of the piece; this line, it will be seen,

diameter, and weight of the projectile, that experiment alone can determine it. If shot could be discharged so accurately to hit a ballistic pendulum at considerable distances, the loss of velocity occasioned by resistance might be easily found; but such a degree of accuracy cannot be obtained, and the ballistic experiments have hitherto only furnished us with results at different distances, *as far* as 300 feet, beyond which, shot cannot be directed with sufficient accuracy to hit the block."—*Sir H. Douglas.*

passes over the object aimed at, the aim being taken by the "line of metal," and will intersect the latter line at *E*, which is the angle of dispart. The line *C E* is the direction the shot would take were it not acted on by the force of gravity and the resistance of the air; therefore the line *C D* is the *true* direction of the shot, and clearly shews that when the marksman takes aim by the "line of metal," at point-blank distance, the shot will pass considerably *over* the object. To this circumstance may be traced the "vulgar error," that a shot *rises* upon leaving the gun. The reverse is the fact. To remedy this error, the dispart, or sight parallel to the centre of the bore, is placed upon the gun.

Sir William Congreve thus explains the principle of the operation of his moveable sights in laying the gun at different angles; and shews that "if the gun were elevated at 55°, its muzzle would intercept the sight of the object; for it is evident that, as the muzzle of the gun is elevated, and the breech depressed, by altering the coin or elevating-screw, the sight, which is fixed on the breech, must be raised. To effect this purpose, the requisite quantity is marked on the instrument,

degree for degree, to preserve the level of the sight, so as to keep the object in view in all the different positions of the gun. In ordinary cases the line of sight is always supposed to be horizontal, and especially for naval purposes; while the line of fire intersects the line of sight at the angle at which the gun is elevated, these lines being parallel only at point blank; consequently, if there were not a corresponding motion in the sight as the gun is elevated, the sight, instead of being still directed to the same object, as at point blank, would be elevated in the air. This corresponding motion, therefore, in the sight, becomes the measure of the gun's elevation, and indicates it by the graduated scale.



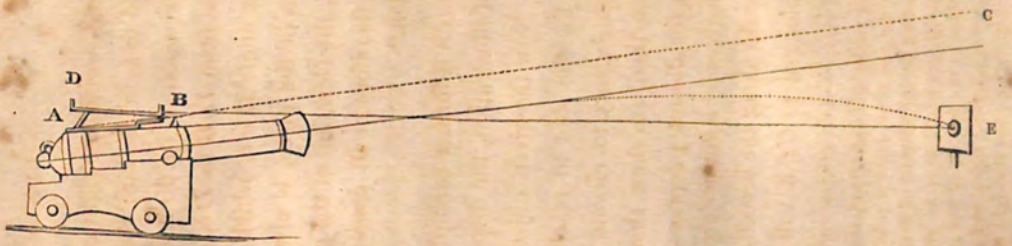

"Thus, in the foregoing diagram—if *A B* be the axis of the gun at point blank, and *C D* the line of sight, viewing the object *X* parallel to the axis at point blank, then, if the gun be elevated into a new position, *a b*, and no change were to take place in the relative position of the sight, but that it should remain as at *c d*, it is evident that *c d*,

produced, would lose sight of the object *X*, and be directed to *x* in the air: that *C D* therefore may still bear upon *X*, its distance from the gun must increase from *D B* to *D b*, as the gun is elevated; and the angle *D a b*, which the sight makes with the axis of the piece, is always equal to the angle *a E A*, the elevation of the gun above point blank, and is therefore in all cases a true measure of that elevation."

SKETCH 3 further exemplifies this subject. For sake of illustration, the dispart* is placed upon the gun. Now the given object is so distant that, in order for the shot to reach its destination, it becomes necessary to elevate the gun four degrees. Suppose then, (to shew that the dispart is not sufficient for distant purposes,) the gun be elevated four degrees by a gunner's quadrant, that the marksman looks along the breech, *A B*, and that this line be prolonged to *C*; it will then be seen that the

* The reader will understand, that the dispart is the same as the sight on the gun when down at point blank. Congreve's elevating sight is used for the purpose of getting the object on at a distance when the dispart would be of no avail. Miller's sight, fitted tangent-fashion at the breech of the gun, answers the same purpose as Congreve's elevating sight, and on account of its simplicity is generally preferred; but the sight of each inventor is yet capable of much improvement.

*Sketch* 3.

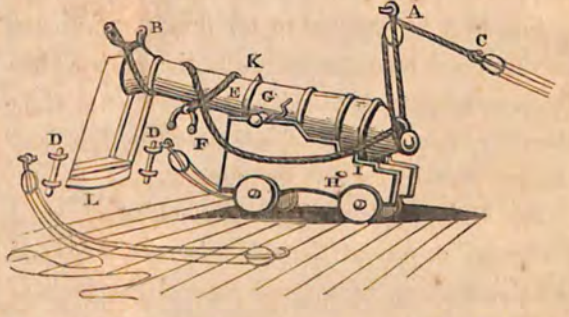



*Sketch* 4.

marksman cannot obtain a view of his object; that the dispart line of sight is considerably *over* it. To obviate this, he has recourse to the elevating sight, and raises it at the hinge four degrees, the angle required for the given distance. The marksman then, as the line *D E* shews, obtains sight of his object. It will be also seen that the sight is not parallel to the bore.*

SKETCH 4 illustrates General Miller's Tangent Sight.

## DISMOUNTING.




THE above sketch represents the most expeditious mode for lifting a lower or middle-deck gun from its carriage.

* It is said that the French were the first to put this method into practice.

Suppose, for example, the carriage be damaged, and that it be necessary to remove it, and supply its place by another.* *A* of the figure represents the strap of the runner-block, which is secured over head to a bolt in the beam; *B*, the muzzle lashing; *C*, the upper block of the train-tackle, hooked to the runner-pendant; the lower block of the train-tackle is hooked to a ring-bolt to the other side of the deck. *D*, bolts for shackles of breeching; *E*, breeching thrown over the gun; *F*, shackles of breeching; *G*, cap-squares; *H*, side-loops; *I*, rear-loops; *K*, dispart; *L*, sweep-piece.

Should it be required to lift the gun out of the carriage, and lay it on the deck, the muzzle, like the breech, must be lifted by means of a runner; therefore, two runners of sufficient length to land the gun on the deck will be required.

No. 1, the captain of the gun, gives the word "Elevate," takes out the coin, places the bed, and sees that the gun be squared between the housing bolts; Nos. 3 and 4 pass the muzzle-lashing; Nos. 5 and 6 unshackle the breeching and throw its ends over the gun; Nos. 7 and 8 take out the fore-

* It is a matter of surprise that His Majesty's ships are not supplied with spare carriages.

lock and throw back the cap-squares, unhook the side tackles, and see all the geer of the gun clear of the carriage. Handspike-men attend with their handspikes; rear-men provide and hook the runner. No. 2 hooks the train-tackle to the runner. At the word "Dismount," all the Nos., except 3 and 4, together with the handspike-men, man the train-tackle, which becomes the runner-tackle. Nos. 3 and 4 remain until the weight of the gun bears an equal strain on the muzzle-lashing;—the handspike-men stay until their handspikes be no longer wanted; they then man the train-tackle. When the gun is high enough, No. 1 gives the word "Well;" No. 2 takes a turn with the train-tackle, and attends to lower the gun; the other numbers run the carriage back, and bring up another to supply the place of that already removed. No. 2 lowers the gun in the new carriage; Nos. 3 and 4 cast off the muzzle-lashing; 5 and 6 shackle the breeching, and 7 and 8 close cap-squares and hook side-tackles.

## MODE OF PROVING GUNPOWDER.

To examine powder, the first process is to rub it between the hands for a few seconds, in order to

find whether it contains any irregular or hard lumps. "The second is by blasting about two drachms of it upon a copper plate, and comparing it with the quality of an approved sort. In this proof,* it should not emit any sparks, nor leave any beads or foulness on the copper."†

Gunpowder should always be of a uniform colour, approaching to that of slate. Good powder should be devoid of smell.

## WINDAGE.

THE windage of a gun, or howitzer, is the difference between the diameter of the bore and the diameter of the shot or shell. See each nature of ordnance, and the tables of shot and shells.

## POINT BLANK.

A PIECE of ordnance is said to be laid point blank for an object when the axis of the gun and the object are on the same plane. In other words,

* "Gunpowder, exposed for seventeen or eighteen days to the influence of the atmosphere, should not increase materially in weight. One hundred pounds of powder should not absorb more than twelve ounces. If it increase in weight more than one per cent. it is a proof that soluble salts abound in a degree which should warrant the condemnation of the powder." —*Sir H. Douglas.*

† "British Gunnery."

parallel to the horizon. "Hence the point-blank range of a gun, or rather *its range* at no elevation*, is the distance from the muzzle of the first-graze,† measured upon a plane passing under the trucks and parallel to the axis of the bore."

## ELEVATION.

ELEVATION may be briefly defined as the angle between the axis of the bore and the plane of the horizon.

The elevation of a gun at sea depends upon two considerations, namely, the distance of the object to be fired at, and the heel, or lateral position, of the ship. If the object be within four hundred yards, a shot will strike it when the axis of the piece is laid in a line parallel with the horizon; in such case, if the ship heel either way, it will be necessary, according as the case may be, to elevate or depress the gun corresponding with the angle to which the vessel is inclined. This is too manifest to need demonstration, and it may easily be proved by placing a pendulum, (connected with a graduated arc,) say

* The range of point blank is, with the "distant" charge, *i. e.* one-third of the shot's weight, 400 yards.

† Shot's graze.—*British Gunner.*

in the centre of the main hatchway, to denote the angle to which the vessel heels.

## PENETRATION OF SHOT.

"THE effect of cannon shot," says Sir H. Douglas, "particularly in naval actions, is always increased, more or less, by the splinters torn off the timber through which the balls penetrate. It is a general rule to use the full charges of powder at the commencement of an action, and to reduce them as the guns become heated. This is a very proper precaution, to guard against accidents in continued quick firing; but a general rule to commence action with the full charges may, in some cases, interfere with the important effect that might be produced from splinters. The prodigious ravages occasioned by splinters, in naval actions, are such, that we should study as much as possible, consistently with other views, to reap the fullest effect from so destructive an agent; and this depends very much upon the degree of velocity with which the balls penetrate.

"*In close action*, shot discharged from large guns, with the full quantity of powder, splinter less

than balls fired from the same nature of guns, with reduced charges."*

## FIRING WITH ROLLING MOTION.

PERIODS of fine weather and smooth water are mostly made available for firing at a mark. It were well, occasionally, to vary this practice, as will be seen by the following observations:—

"In every case where there is much motion, the shot will not be delivered from the cylinder till its direction is altered, more or less, from that in which the piece was pointed when the trigger was pulled. It is, therefore, important to consider whether it is more advantageous to fire with a rising, or with the falling side; in other words, the weather or the lee roll.

* "This may be familiarly exemplified by firing a musket or pistol, charged with a bullet, through panes of glass, at different distances, or with different charges. Superior velocity will make a clean, round hole, without breaking or even cracking the plate; but a certain reduced celerity will dash the glass to pieces.

"In firing into masses of timber, or any solid substance, *that* velocity which can but just penetrate will occasion the greatest shake, and tear off the greatest number of, and largest, splinters; for as, in the brittle glass, the parts struck by a ball moving with great celerity, are driven out before they can communicate motion to the adjacent parts of the medium, so, with inferior velocity, the corresponding shakes extend to various distances, and tear the fibres of timber, or disturb the parts of the medium, in various degrees."—*Naval Gunnery.*

"A vessel engaging to leeward, that is, fighting her weather guns, must be in the trough of the sea when the side engaged begins to rise; and whilst it is rising, she must be performing a lee-roll.

"The disadvantage of firing from the hollow between two waves being manifest, the inexpediency of firing at the *beginning* of the rising motion can be also proved,—for the one ensues immediately from the other; and a very material objection to the practice of firing *during* any part of the rising motion, comes from this,—that the lee slope of a wave being always more abrupt or steep than the weather-side, the change which takes place in a vessel's position in making a lee-roll, accelerated and increased by the action of the wind, is much more rapid than in rolling to windward, and, consequently, the direction or elevation of the ordnance would be much more quickly and considerably disturbed in firing with the rising, than the falling motion, in this case.

"It appears, therefore, that in fighting the weather side, it is preferable to fire at the pause immediately before the commencement of the declining motion, (unless the vessel heel so considerably as to incur danger from the increased action of the recoil,)

because the ship, being then on the top of a wave, will command a better view of the enemy, and the declining motion will be operating to lessen the slope in the direction of the recoil.

"In fighting to windward," (by this is meant, possessing the weather-gage, and fighting the lee guns,) "some of these arguments are reversed. The declining motion of the side engaged is then a lee-lurch; and, at the commencement of that motion, the vessel must be in the trough of the sea. We should therefore so far modify the maxim already suggested as to fire at the end of the falling motion of the fighting, or lee side, when the vessel comes to the top of a wave, so that the actual discharge may not take place after the pause which attends the change of motion."

But there are other considerations to be taken into account. "If, in fighting the weather-guns, the ship be heeling under the influence of a strong breeze, her cannon, fired at the commencement of the declining motion, or of the pause which precedes it, will rush in with such violence, from the inclination of the deck being in the direction of the recoil, that the breechings and ring-bolts will frequently be incapable of resisting so severe a

shock, particularly when the guns are loaded with two shot. In such cases, consequently, the ordnance should not be fired until the declining motion be partly performed.

"It follows from what has been advanced, that shot intended to take effect on the hull of an enemy should rather be discharged with a *falling*, than with a rising side; but that such pieces as may be appointed specially to act against the masts and rigging should, on the contrary, be fired with a rising motion, the aim being taken low."*

Possibly the foregoing observations may be disputed; but the only way to ascertain their correctness will be to put them to the test of practice. For this reason it is strongly recommended to make experiments in calms with a heavy swell.

## SHELLS DISCHARGED FROM GUNS.

Few naval gunners are acquainted with the manner of discharging a shell from a gun. The shell should be fastened by tin straps to a wooden bottom—a hole is made in the end of the rammer to admit the fuse, and the shell is thus forced home upon

* "Naval Gunnery."

the cartridge, but not *struck* in the same manner of ramming home wad and shot. The wooden bottom serves the purpose of the wad. If a wad were used the fuse might not *ignite*.

## MORTARS.

MORTARS are generally fired at 45° of elevation, and the required range regulated by varying the charge of the powder; but the greatest range experience proves to be obtained by a lower elevation.

LOADING.—The required quantity of powder is first put into the chamber of the piece, and the shell being loaded, and the fuse fixed, is placed in the mortar by means of hooks,—the fuse being *outwards*,* or towards the muzzle of the mortar.—The mortar is pointed by means of two pickets, which shew the direction of the object, and the

* A curious piece of artillery practice was lately exemplified on board one of His Majesty's steam vessels-of-war upon the occasion of "*trying*" the effect of a shell fired from one of her guns. The enlightened gunner thought proper to enter the fuse of the shell *foremost* into the muzzle of the piece, not conceiving it possible the fuse could ignite entered in any other position. The shell was discharged—not so the *gunner*—man-slaughter not having ensued.

piece is fired by the application of a match or port-fire, the explosion igniting the fuse.

CAUTION.—Before entering the shell into the piece, the bottom of it should be wiped well with a sheep skin.

HOWITZER.—The howitzer is a species of mortar, mounted in the manner of a gun, for discharging shells &c. from the position of point blank, to the elevation of 12°. Large howitzers resemble carronades in their internal construction. The chambers of those of a small calibre are not so large in proportion to their bores. Howitzers are pointed *in the same manner as* guns.

## RANGES OF NAVAL ORDNANCE.

| Nature of Ordnance Length, Weight, &c. | Description of Charge. | Point Blank. | Degrees of Elevation. | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 1° | 2° | 3° | 4° | 5° | 6° |
| | | Yards. | Yards. | Yards. | Yards. | Yards. | Yards. | Yards. |
| 32-pounder, 9 ft. 6 in. 56 cwt. ..... | Distant 10 lbs. 10 oz. | 400 | 725 | 1125 | 1425 | 1710 | 1890 | 2090 |
| 32-pounder, 9 ft. 6 in. 56 cwt. ..... | Full 8 lbs. | 345 | 625 | 1005 | — | — | — | — |
| 32-pounder, 8 feet ... 49 cwt. ..... | Distant 10 lbs. 10 oz. | 295 | 595 | 960 | 1285 | 1555 | 1715 | — |
| 32-pounder, 8 feet ... 49 cwt. ..... | Full 8 lbs. | 290 | 568 | 895 | 1000 | — | — | — |
| 24-pounder, 9 ft. 6 in. 50 cwt. ..... | Distant 8 lbs. | 395 | 695 | 1025 | 1350 | 1600 | 1790 | 2000 |
| 24-pounder, 9 ft. 6 in. 50 cwt. ..... | Full 6 lbs. | 335 | 555 | 995 | 1205 | 1465 | 1585 | — |
| 24-pounder, 7 ft. 6 in. Congreve's, 40 cwt. | Distant 8 lbs. | 375 | 690 | 990 | 1355 | 1558 | 1698 | — |
| 24-pounder, 7 ft. 6 in. Congreve's, 40 cwt. | Full 6 lbs. | 318 | 598 | 895 | — | — | — | — |
| 18-pounder, 9 feet ... 42 cwt. ..... | Distant 6 lbs. | 297 | 657 | 1015 | 1355 | 1548 | 1727 | — |
| 18-pounder, 9 feet ... 42 cwt. ..... | Full 4 lbs. 8 oz. | 258 | 574 | 934 | — | — | — | — |
| 12-pounder, 8 ft. 6 in. 32 cwt. ..... | Distant 4 lbs. | 295 | 698 | 910 | 1180 | 1395 | 1575 | 1800 |
| 12-pounder, 8 ft. 6 in. 32 cwt. ..... | Full 3 lbs. | — | — | — | — | — | — | — |
| 9-pounder, 8 ft. 6 in. 25 cwt. 2 qrs. 10 lbs. | 3 lbs. | 297 | 680 | 899 | 1195 | 1390 | 1620 | 1800 |

*Note*—It has been recommended, unless the object be close, to allow ¼° elevation for gravity and resistance of the air, when firing at point-blank distance.

## LANDING AND EMBARKING HEAVY ORDNANCE IN A SURF.

To lessen the difficulties and danger consequent upon the *usual* mode of transporting artillery, *in* open boats, Mr. Cowe, the boat-builder of Woolwich dock-yard, has suggested a safe and serviceable system, by which means, heavy ordnance may be conveyed from the ship to the shore, or shore to the ship, at periods when the surf on the beach would prevent the possibility of deeply laden boats approaching the shore. To effect such services, the projector of the plan employs the ship's launch, fitted with the windlass and trunks already "allowed" for the purpose of weighing anchors.

The gun is thus prepared for landing:*—

A pair of gun-slings is clapped on in the usual way —a single rope,† about seven inches in circumference, is made fast round the middle of the gun, or position best calculated to poise the piece. It is then removed from its carriage, and placed on a cradle or sledge. Should this sledge not be previously prepared, it may be made of any piece of timber that can be readily procured;—the spare-anchor stock cut‡ asunder, re-

* The author has been compelled to abridge Mr. Cowe's directions.

† This rope is called by the inventor the heaving-up rope.

‡ Query, separated.

versed, and the two small pieces brought and bolted together, hollowing out the upper part to the form of the gun, will answer perfectly well: the bolts which fasten the *two parts* of the sledge, will serve to pass the lashings round the gun in the cradle. That end of the sledge which is intended to go foremost should be rounded away, so as to rise over any impediment it may meet with on the ground. A strong rope is then fastened under the *muzzle* of the gun, for hauling it on shore.

Small lines are to be fastened to the muzzle and breech, to keep the gun steady—those lines* are to be marked, so as to indicate when the gun is in a fore and aft direction.

The muzzle and breech should be padded with swabs or mats, to prevent injury to the bottom of the boat.

The gun, thus prepared, should be hoisted out by the gun-slings, in the usual way, and lowered sufficiently into the water; the heaving-up rope is then to be rove up through one of the trunks, and brought to the windlass; and when the weight of the gun is on the boat, it should be disengaged from the purchase †

* These lines should be small, just sufficient to steady the gun, for this reason:—Should it happen, from any cause that cannot be foreseen, that the rope which heaves the gun up slips or gives way when the steadying lines are made fast, the gun would swing out, bringing the whole weight on the gunwale of the boat.

† The professional reader will perceive that the inventor's directions are not always sufficiently practicable for the seaman to follow, and therefore care must be taken that the slings of the gun be long enough, or that some ready method be adopted to disengage the purchase from the gun so soon as *the trunk*-rope receives its weight.

which hoisted it out, and hove as close as possible up to the bottom of the boat.

In order to relieve the windlass, the second gun should be hove up to a piece of timber, or three capstan-bars lashed together, and placed across the boat. A stopper should then be made fast to the heaving-up rope, and fastened to the bars—the rope round the windlass should be slacked-up, and the first gun will be suspended by the capstan-bars.

A mouse or knot should be worked in that part of the heaving-up rope which is nearest the windlass, to prevent the stopper from slipping. The lines for steadying the gun are made fast to the gunwale of the boat.

A seventy-four-gun ship's launch, with one iron twenty-four-pound gun suspended, heels only eight inches, therefore it is in perfect safety. The second gun, when suspended, brings the boat upon an even keel.

When both guns are secured, the carriages and stores should be placed in the boat in positions to avoid impeding the people pulling at the oars. On approaching the shore, care must be taken to bring the boat to an anchor well without the surf; for should the guns be allowed to touch the ground whilst suspended, they would inevitably stave the boat's bottom. The depth of water should determine at what distance from the shore the boat should be anchored. Should there be a sufficient number of men* ready on the beach to haul the gun up, the only communication necessary would be a small line, by which the large

* Forty men have thus drawn an iron twenty-four pounder up a rough causeway.

hauling rope might be conveyed on shore ; men or horses may then be attached to the rope.

Should the operation be carried on where there is a rise and fall of tide, and the guns be not immediately wanted, it will be only necessary to take the boat in at high water,* and drop the gun until the tide leaves it.

When Embarking the Gun, the boat must be anchored well without the surf, and care taken that the anchor be sufficiently heavy† to withstand the weight of the gun, and the impediments it may meet with when "heaving off."

The gun is prepared in precisely the same manner as for landing, and placed as near the water's edge as possible. The rope for heaving it off should be conveyed to the stern of the boat; and should there not be a sufficient number of men to haul it off by hand, it must be brought to the windlass, and hove off by that purchase. It is here proper to notice, that the windlass is only secured for a perpendicular strain, and if this rope be brought to it direct from the stern of the boat, the strain would be horizontal ; to obviate which, an eye bolt is driven through the boat's bottom, directly under the windlass, to which a leading-block should be hooked ; the rope must be rove through‡ it,

* For reasons which must be manifest to every seaman, high water is the time of tide best suited to beach artillery.

† In addition to the inventor's caution, it is here recommended not to trust solely to the stream-anchor in heaving off a heavy gun.

‡ The reader will perceive that, though there be a block attached to the bottom of the boat for the purpose of acting as a fair-leader, and bringing upon the windlass a perpendicular strain, the inventor

and then brought up to the windlass; by doing so, the strain is kept perpendicular.

Twenty-nine men have hauled by hand a twenty-four pounder from the water's edge to the stern of a boat moored about thirty fathoms from the shore.

The heaving-*up* rope and the steadying lines are to be attached to the heaving-*off* rope, so that they may be got at when the gun is under the stern. When the gun is as close as possible to the stern of the boat, the heaving-up rope should be rove through the trunk and brought to the windlass; the cable to be slackened until the boat be directly over the gun, when it should be hove up and secured as for landing. The second gun is got off in the same manner, when the boat may proceed to the ship and deliver them.*

The advantages gained by this mode of landing and embarking guns are—Expedition in accomplishing the object, without endangering the boat or men—Performing such service at a period when it could not be effected by the usual means,—and that, after landing the guns, the boat is ready for any other service, by being *kept afloat* beyond the surf.

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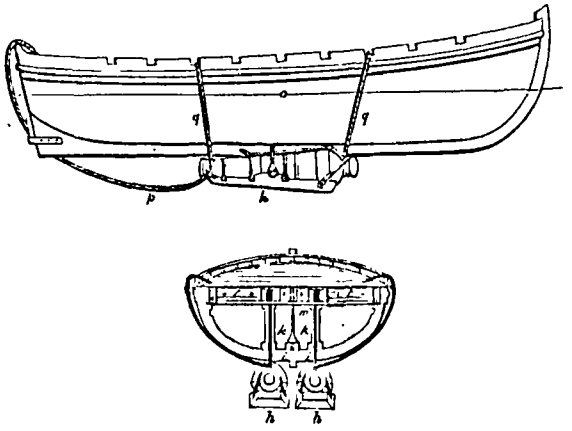
has devised no method by which the heaving-off rope from the shore is to be rove through the block secured to the keel. It will therefore be necessary, to prevent *diving* for the purpose of pointing the end of the rope through the block under water, to reeve previously a small *leading* line through the trunk and through the block at the keel, bringing up the under end *in-board*, ready to bend on to the "pointed end" of the heaving-off rope as soon as it reaches the boat from the shore.

* Attention will be required in clearing the gun from the boat's bottom, as also in hooking or toggling the purchase by which it is to be hoisted into the ship.

## GUNS SECURED TO BOAT'S BOTTOM.




EXPLANATION OF FIGURES.—An elevation and midships section of a seventy-four-gun ship's launch, with two thirty-two pounders suspended from the windlass; *h h h*, the guns lashed on wood slides; *i i i*, the heaving-up ropes by which the guns are hove up to the boat's bottom; *k k*, water tight removeable wood trunks, through which the ropes pass to the windlass; *l l*, the windlass in two parts, connected by a wrought-iron gudgeon and socket; *m*, a small removeable stanchion, which supports the middle of the windlass; *o*, the line of flotation, when there are two thirty-two pounders suspended, their carriages, ammunition, stores, and twenty men in the boat; *p*, the rope by which the gun is hauled on shore when landing, and off the shore when embarking; *q q*, guide ropes, to steady the guns when under the boat's bottom.

# PURSER.

## PRELIMINARY REMARKS.

It will not, at present, be necessary to enter into any minute detail respecting the duties of this officer, inasmuch as it is expected that the Admiralty Instructions, relating to the purser, will shortly undergo a revision. In some general points, however, which no contemplated modification can possibly affect, the present work will present a few hints. Tables, worthy of the purser's attention, are subjoined to this chapter.

As the office of Judge-Advocate occasionally devolves on the purser, some hints are given, in the following pages, for his general guidance in this important duty.

# GENERAL DIRECTIONS.

## SYSTEM.

THE maintenance of system should be the principal study of the purser. Although this officer is not regarded in the light of an executive, he should be impressed with the belief that order and regularity are as essential in the execution of every service connected with his department, as that of any other on board of a vessel of war.

Unless the purser previously consult with the senior lieutenant upon the contemplated execution of duties connected with his office, not only will the public service suffer inconvenience, but, in nine cases out of ten, that friendly feeling which should

subsist between these two officers is sure to be disturbed. The purser is, therefore, counselled to obtain from the senior lieutenant the precise period which he may deem best suited to the reception on board of the several supplies demanded.* Such precaution will prevent misunderstanding and materially tend to promote despatch.

## CUSTODY OF PROVISIONS.

THE purser is required to communicate constantly with the master, touching the order, state, and preservation of the provisions and victualling stores, and particularly to commence his issue of supplies with those which will be most liable to decay, or which may bear marks indicating the oldest date. Vide *Master*.

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* It has frequently happened that, from neglecting to consult with the senior lieutenant as to the time best suited to the reception of supplies, provisions have been sent along-side of the ship at a period when the crew has been employed in the execution of pressing service, and which, from its importance, precluded the possibility of postponing its performance. Indeed, before now, impatient and *miscalculating* pursers, regardless of every other consideration but that of "*completion*," have despatched a plentiful supply of *coals* to the ship during the period in which the senior lieutenant had been sedulously occupied in the *interesting* act of *painting* the vessel. Under such circumstances, pursers need not be surprised if less of anxiety be evinced for the *delivery* of the coals than for the preservation of the paint.

## SECURITY OF SPIRITS AND WINE.

ALL casks containing wine and spirits should be well-examined, on their arrival along-side in the lighter.* The purser should use every exertion to stow under hatches all liquors and wine, before *night*-fall; and should circumstances preclude the the possibility of striking such casks below in the hold, he should apply to the commanding-officer, to place a sentinel in charge of whatever wine and spirits may remain on deck after dark.

## STEWARD-ROOM—SERVING PROVISIONS.

THE purser should consider himself responsible for the state and condition of the steward-room; and never permit provisions to be served at any other periods than those which the custom of the service prescribe. He should, also, enforce the most rigid observance touching the care of lights. It is the duty of the purser to inspect the steward-room daily, and to submit to the captain, or commanding officer, any suggestion which may tend to prevent foul effluvia below.

* To the purser this examination is of the first importance. As "leakage is not allowed," he should look to the allowance contained in the cask.

## BREAD-ROOM—CONDITION OF THE BREAD.

On no account is the purser to "start the bread" or stow it in bulk without the especial commands of his captain. And should the bread at any time appear to be damp, he is to consult his superior as to the propriety of drying the biscuit upon deck. Some officers are opposed to this practice, asserting, that exposing biscuit to the sea air injures its preservation. Indeed, many advocate the necessity of keeping this article of food closely confined. But if bread be damp, or in any way damaged by leakage, the defective bags should be immediately separated, and a survey held upon their condition.

## COALS FOR THE FORGE.

Upon proper application from the carpenter, the purser is required to supply coals for the use of the forge. The quantity consumed should be noted in the log, and the purser should procure from the carpenter receipts for coals so supplied.

## LIGHTS AND LANTERNS.

The purser should always have a proper supply of lanterns prepared for the execution of duties

which need the assistance of light; and he will do well to consult with the senior lieutenant as to the number of lanterns which should be severally assigned for the use of the different decks. In ships of the line, and, indeed, in all ships, it is advisable to have the working lanterns lettered and numbered, in the following manner: — M$^{n}$ D$^{k}$, N° —; M$^{dle}$ D$^{k}$, N° —; L$^{r}$ D$^{k}$, N° —; Orlop, N° —; B$^{sn's}$ Mate, N° —; Q$^{r}$ Mast$^{r}$, N° —; Serj$^{t}$ M$^{rne}$, N° —; M$^{r}$ at Arms, N° —; and Ship's Corp$^{l}$, N° —.

By this mode of labeling, lanterns are not so liable to "ill-usage," or to come in awkward collision with an *unfriendly* foot. And here may be made the remark, that a paucity of candles neither benefits the public service nor the private individual.*

* It was the constant practice of an officer of this grade, well known in the service by the *soubriquet* of "the prince of pursers," to call for *more* lights when any particular duty required an extraordinary muster of lanterns upon deck. Upon striking top-masts, veering cable, transporting provisions, or clearing boats, the "prince" was the first to "fall foul" of his steward, for what he was *pleased to consider* and term "deficiency of lights." This *enlightened* liberality was not lost upon the mate's mids, nor yet the fore-mast men; the latter of whom would frequently ejaculate —"We wants no more, Mr. R——s. Lord bless you, Sir! *we've* lights enough for more nor double the work."

It is needless to add, that human nature was a favourite study with the "prince."

SIGNAL LANTERNS.—This officer will do well to ascertain, from the superintendant of the dock-yard, whether, in the supply of signal lanterns, it be required to follow any *particular* form. This is essential, as *established* forms perpetually vary! He should constantly inspect these lanterns, in order that he may satisfy himself they are perfectly fit for service.—Vide *Signal Midshipman.*

FIGHTING LANTERNS.—The purser is required to furnish a lantern for each gun, and opposite fore and aft, at the several quarters. These lanterns should be lettered and numbered according to the deck and gun to which they immediately pertain, and should never be removed from the fixed position over the port.

It is not customary in the navy to place candles in the fighting lanterns until lights be required for actual service. Prudential motives support the practice. When the fore-mast men are short of lights below, they not unfrequently *shorten* the allowance aloft and *lighten* the socket of its load. But it is the duty of this officer, at evening quarters, to see that a proper supply of candles be in perfect readiness to place in the fighting-lanterns at a moment's notice. A tin case, containing the number of

candles required for each deck, suspending the case in a position of ready access, will answer the desired purpose. The cases should be kept locked, and their respective keys given in charge of the sentinels planted on the different decks.

In well-regulated ships, the lantern-men are exercised in supplying candles for the lanterns. In ships of an opposite character, the exercise is *reversed.*

## PRESENTATION OF ACCOUNTS FOR CAPTAIN'S SIGNATURE.

WHENEVER accounts are presented to the captain for signature, the purser is cautioned to allow his commander sufficient time to examine them. Signatures to official documents are not to be affixed in haste.

# IN PORT.

## VICTUALLING THE SHIP.

It is the duty of this officer to obtain from the captain the exact period for which to victual the vessel, and to specify in the "Demand" the required quantity of each particular supply. It may be necessary to complete the bread to three months, the cocoa to two, and the flour to a fortnight only. These are considerations too often overlooked.

## SUPPLY OF FUEL.

The want of fuel becomes a serious deficiency to a vessel of war. The purser should never permit the ship to be short of wood, or coals; and, whenever he may have occasion to replenish his stock,

he should intimate the circumstance to the captain, or commanding-officer — such intimation comes with a better grace from the purser than from the master.—Vide *Master.*

## USE OF SHIP'S BOATS.

A WELL-TIMED application will always ensure to the purser the service of a boat, to convey supplies from the shore to the ship. This officer should always be spared the expense of *hiring* boats on public service.

| Species of Provisions. | Contents of each cask, &c. | Tare of each cask, &c. | Casks. | |
|---|---|---|---|---|
| | | | Length. | Diameter. |
| | lbs. | lbs. | Inches. | Inches. |
| Bread, in Bags | 112 | 2 | — | — |
| Beef, Irish, in Half Puncheons | 304 | 60 | 31½ | 25 |
| Barrels | 208 | 42 | 28 | 21 |
| Pork, Irish, in Half Puncheons | 320 | 60 | 30 | 25 |
| Barrels | 208 | 42 | 27 | 21 |
| Flour, in Hogsheads | 560 | 86 | 36 | 28 |
| Half Hogsheads | 280 | 45 | 27 | 22 |
| Barrels | 360 | 52 | 30 | 24 |
| Suet, in Barrels | 280 | 52 | 30 | 24 |
| Half Hogsheads | 180 | 45 | 27 | 22 |
| Raisins, in Barrels | 336 | 60 | 30 | 25 |
| Half Hogsheads | 224 | 44 | 26 | 22 |
| Sugar, in Hogsheads | 560 | 100 | 35 | 28 |
| Half Hogsheads | 260 | 66 | 28 | 22 |
| Barrels | 372 | 77 | 30 | 25 |
| Cocoa, in Hogsheads | 336 | 86 | 36 | 28 |
| Half Hogsheads | 150 | 45 | 27 | 22 |
| Barrels | 224 | 52 | 30 | 24 |
| Tobacco, in Barrels | 150 | 52 | 31 | 24 |
| Half Hogsheads | 100 | 45 | 26 | 23 |
| Butter, in Firkins | 65 | 14 | 17 | 14 |
| Cheese, in Casks | 120 | 30 | 29 | 18 |

# DIMENSIONS OF CASKS AND PACKAGES.

| Species of Provisions. | Contents of each cask, &c. | Tare of each cask, &c. | Dimensions. | | |
|---|---|---|---|---|---|
| | | | Length. | Diameter or Breadth. | Depth. |
| | lbs. | lbs. | Inch. | Inches. | Inch. |
| Tea, in Cases | 180 | 126 | 39 | 25 | 25 |
| Half Cases | 105 | 90 | 39 | 24 | 16 |
| Quarter Cases | 60 | 58 | 39 | 16 | 15 |
| Soap, in Cases | 224 | 45 | 33 | 17 | 17 |
| Half Cases | 112 | 28 | 26 | 16 | 13 |
| Lime-juice, in Cases | 72 | 110 | 32 | 18 | 14 |
| | Gallons. | | | | |
| Peas, in Hogsheads | 60 | 86 | 36 | 30 | |
| Barrels | 40 | 52 | 32 | 24 | |
| Half Hogsheads | 28 | 45 | 27 | 23 | |
| Oatmeal, in Hogsheads | 92 | 86 | 36 | 28 | |
| Barrels | 60 | 52 | 31 | 24 | |
| Half Hogsheads | 40 | 45 | 26 | 23 | |
| Vinegar, in Hogsheads | 63 | 100 | 35 | 28 | |
| Barrels | 45 | 77 | 31 | 24 | |
| Half Hogsheads | 32 | 66 | 26 | 22 | |
| Spirits, in Puncheons | 84 | 128 | 40 | 30 | |
| Hogsheads | 63 | 100 | 35 | 28 | |
| Barrels | 42 | 77 | 32 | 25 | |
| Half Hogsheads | 32 | 66 | 27 | 22 | |
| Wine, in Pipes | 126 | 165 | 52 | 33 | |
| Puncheons | 84 | 128 | 40 | 30 | |
| Hogsheads | 63 | 100 | 35 | 28 | |
| Barrels | 42 | 77 | 32 | 25 | |
| Half Hogsheads | 32 | 66 | 27 | 22 | |

# NAVAL JURISPRUDENCE.

A NAVAL court-martial is one of the fairest tribunals in the world; but, like all human institutions, it has been injured by the gradual abuses of time. At present, our naval judicature is beset by several anomalies, which not only perplex its proceedings, *but* render them in danger of being invalidated.*

These anomalies arise chiefly from the frequent revisions and changes in the "*Naval Instructions*," and "*Regulations for His Majesty's Service at Sea*,"

* There are several instances where the informalities and illegal proceedings of courts-martial have been severely censured by the Legislature, as well as brought under the cognizance of the civil courts; and the members composing the court have, individually and collectively, become amenable to the laws of their country. Naval and military courts-martial are subject to the control and jurisdiction of the supreme courts of King's Bench and Common Pleas.

while the Act of Parliament, to which such instructions must be subservient, *remains unaltered*, since the 19th of George III! That glaring discrepancies should ensue, from such *shifting* on the one part, and immobility on the other, is manifest; and it is equally clear, either that informalities in the proceedings of a court-martial must often occur, or, that the course of justice must be as often impeded.

For example:—Within these few years, commanders, or "second captains," of ships of the line have been *permitted* to sit at courts-martial in preference to junior officers of the same grade in *command* of sloops of war. Now Section XIV. of the Act of Parliament states that—

"In case any court-martial shall be appointed to be held at any place where there are no less than three, nor yet so many as five officers of the degree and denomination of a post-captain, or of a superior rank, to be found, then it shall be lawful for the officer, at the place appointed for holding such court-martial, who is to preside at the same, to call to his assistance as many of the commanders of His Majesty's vessels, under the rank and degree of a post-captain, as, together with the post-captains then and there present, will make up the number of *five*, to hold such court-martial."

When this Act was framed, the legislature evidently meant by the term "*Commander*," the officer of that grade in actual *command* of one of His Majesty's sloops, not a commander being in the same ship under a *post captain*, for such an officer was then unknown, or even contemplated; to say nothing of the important clause mentioned in another section of the same Act, touching the assemblage of five vessels of war, which clause clearly shews that the *legislature* intended that five persons in *superior* command, in rank not below that of the commander, were necessary to constitute a naval court-martial.

In the last revision of the "Regulations for His Majesty's Sea Service," the following article appears in the chapter entitled "Courts Martial."

"A captain in command of a sloop-of-war, notwithstanding his *temporary* loss of rank in other respects, is to sit at courts-martial according to his rank on the list of captains; and *commanders*, acting in the temporary *command* of *His Majesty's ships*, shall be considered liable to *sit at courts-martial*, according to their respective ranks. Lieutenants shall not be permitted to sit as members at courts-martial, although they may be acting in the *temporary* command of ships."*

* This article remains the same as that which appeared in the code issued in 1816.

The paragraph above cited is the only passage which appears in His Majesty's "Regulations" relative to rank and precedence at courts-martial.

The stress that appears to be laid upon the words *command*, and *temporary command*, of His Majesty's ships, as particularly applicable to captain and commanders, is sufficient to shew that the revisers of these regulations could never have contemplated that commanders serving in the *same* ship with captains were eligible* to become members of a court-martial.

To prevent the possibility of officers giving different versions to the various sections in the statute which was intended by the Legislature to guide and govern the proceedings in every case of a naval court-martial, and particularly to remove, in some measure, those penal liabilities to which the members composing a court may, collectively and individually, be subjected by the misconstruction of an ambiguous Act of Parliament, it may be necessary to remodel the statute, and amend those sections which, in many instances,

* An instance has recently occurred, where an officer was dismissed His Majesty's service by the sentence of a court-martial composed in a manner at variance with the 19th section of the Act of Parliament. This officer has since been reinstated.

have puzzled and perplexed* the best crown lawyers this country has ever produced.

## DUTIES OF A NAVAL JUDGE-ADVOCATE.

THE duties required to be performed by the Naval Judge-Advocate are frequently delegated to the purser, and therefore it is highly essential that this officer be not only sufficiently versed in all matters connected with the legal forms of the court, but that he should also be possessed of a competent knowledge of what is technically termed the Law of Evidence, and the forms of Courts of Civil Judicature. This is an indispensable knowledge, because it often happens that, in consequence of the silence of the Act of Parliament and the Naval Instructions upon the subject at issue, disputed points arise, which can only be decided by the customary

* The celebrated Mr. Cust, counsel for conducting the affairs of the Admiralty, in "answering a case" laid before him, thus concludes his legal opinion:—"It is a misfortune that the Act, which was made for reducing former Acts of Parliament into one, should be imperfect, and defective in directions concerning courts-martial."

"The variety of constructions," says M'Arthur, in his valuable work, "of which several of the sections are susceptible, and the want of explicitness in the wording of others, have too often left the minds of the best informed in a state of doubt and conjecture. Hence the necessity of the executive power, and members of courts-martial, resorting so frequently to the opinions of counsel."

practice of civil courts under similar circumstances.*

## COPY OF CHARGES.

"WHEN a court-martial is appointed to be held, the officer who is to *preside* thereat shall take care that a *copy* of the *charge* or complaint be delivered to the person accused, as soon as may be after he shall have received the order to hold such court-martial, and not less than twenty-four hours before the trial, except in cases of mutiny, or such other pressing circumstances as might render such delay inexpedient to the public service."†

## JUDGE-ADVOCATE'S WARRANT.

By Admiral *Fairbrother*, &c. &c. &c.

WHEREAS the Right Honourable the Lords Commissioners of the Admiralty have directed me, by an order dated the 11th instant, to assemble a court-martial, and try Lieutenant *Thomas Thomas*, B. of His Majesty's ship the Active, for [here follows the charge]; And whereas by an Act passed in the 22nd Geo. II. for amending, explaining, and reducing into one Act of Parliament the laws relating to the government of His Majesty's ships, vessels, and forces by sea: and also, an Act made in the 19th year of the reign of His Majesty Geo. III., intituled "An Act to explain and amend the foregoing Act;" It is ordered, "that in the absence of the Judge-Advocate, and his deputy, the *Court* shall have full *power* and *authority* to *appoint any person* to execute the office of Judge-Advocate:"

I do, with the *consent and approbation* of the members who *constitute* this court, hereby *authorize* and *empower you to execute* the

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* "The duties of a naval judge-advocate are defined," says M'Arthur, "in so general a manner, in the Act of Parliament and printed instructions, that, on different occasions, it has been deemed expedient to have the opinions of counsel."

† "Naval Instructions."

office of Judge-Advocate on the above occasion. For which this shall be your warrant.

Given on board His Majesty's ship Britannia (*where the court is assembled*), in Portsmouth Harbour, this 8th day of Feb. 1835.

WM. FAIRBROTHER.

To Thomas Giles, Esq., hereby appointed to execute the office of Judge-Advocate.

It will be seen that the deputy-judge-advocate's appointment, according to the form of warrant, requires "the *consent* and *approbation* of the members who constitute the court. But the court is not constituted, nor has power to act, until it be legally convened, and the members assembled, and sworn in. This anomaly has long since been pointed out by the celebrated Judge Bathurst.

## JUDGE ADVOCATE'S POSITION WITH THE PRISONER.

IT is clearly laid down by M'Arthur, "that though a judge-advocate may be considered in the light of a prosecutor for the crown, yet it does not from thence follow that he is to deny reasonable assistance to the prisoner in his defence, either in point of law or of justice. On the contrary, it is his duty that the proof, both on the part of the crown and the prisoner, should be properly laid before the court. And where any doubtful point may arise, he should rather incline to the part of the prisoner; and nothing should induce him to omit any circumstance in the minutes of proceedings that may have a tendency to palliate the charges exhibited against the party accused; were he to omit the

insertion of any such circumstances, of his own accord, with a view to save himself trouble, his conduct would be highly culpable."

JUDGE ADVOCATE'S OPINION upon points of procedure. —In the deliberations and debates of a court-martial, the judge-advocate may offer his sentiments and opinion, if required; or, if he observe any error in point of law, or doubts to arise, he ought to offer his judgment for the information of the court; and he should communicate every matter which may conduce to a legal decision of the points in question.

## ASSEMBLING THE COURT.

WHEN the officers who are to constitute the court are assembled on board the "appointed ship," the judge-advocate will, in the first instance, ascertain the seniority of the captains present. If any captain be absent upon "Admiralty leave," the circumstance is to be reported to the president, who, according to the "Naval Instructions," is to receive the cause assigned as an admission for the absent captain. But should any member be absent through ill health, the surgeon of the ship will be required to attest upon oath the indisposition of his captain, and his inability to become a sitting member of the court convened.

Should the surgeon, however, decline to make such deposition, or the testimonials produced of the captain's ill health be not satisfactory, or be deemed inadmissible, the members then assembled may immediately break up,* as not being authorized to form a

* The reasons which prevent the formation of a court are to be stated in a letter to the Admiral on the station, or addressed to the Secretary of the Admiralty, signed by all the members assembled, or convened by notice or signal.

court; or to dispense with the non-attendance of a member not legally excused.

"On the other hand, when a member's inability to attend is admitted, and the court is formed, the judge-advocate takes the fact down in the minutes, immediately after the names of the members present, in the form prescribed."

FORM OF MINUTES.

MINUTES of proceedings at a Court-Martial, held on board His Majesty's ship San Josef, at Hamoaze, on the 12th day of February, 1835.

PRESENT:

Richard Curry, captain of His Majesty's ship San Josef, and senior captain of His Majesty's ships and vessels at Hamoaze.

CAPTAINS:

| | |
|---|---|
| James Richard Dacres. | Jeremiah Coghlan. |
| John Clavel. | William Fisher. |
| John Simpson. | Frederick Hickey. |
| Thomas White, (A.) | Henry Fanshaw.* |

AN INTERESTED PARTY is not to become a member of the court.

By the fifth Article in the printed instruction under the head of Courts-Martial, the following prohibitory passage appears:—"If any officer entitled by his rank to sit at a court-martial be personally *interested* in the matter to be tried, he shall not be permitted to be of

* The name of the captain absent on Admiralty leave, as well as that of the captain unable to attend through ill-health, must be inserted in the minutes, immediately after the names of those present, thus, "being all the captains of ships in Hamoaze and the anchorage at Plymouth Sound, except Captain John Norman Campbell, of His Majesty's ship ———, who is absent with leave from the Lords Commissioners of the Admiralty, and Captain ———, of the ———, who certified to the President his inability to attend, through ill-health."

the number of members of whom the court shall be composed. If any doubt shall arise as to his being so personally interested, the question shall be decided by the majority of officers whose right* to sit in court is unquestioned."

## SWEARING-IN THE COURT.

THE members who are to constitute the court being seated to the right and left of the president, according to seniority, and the judge-advocate facing him at the bottom of the table, the president then directs the prisoner to be brought into court, attended by the provost marshal. The witnesses, *both in support of the charge*, and of the prisoner's defence, are also to be admitted into court, and every other person who may

* "Upon the principle," says M'Arthur, "that members of a court-martial are both judges of the law and of the fact, and that, as such, they are to be considered in the double capacity of judges and jurors, amenable to the laws of their country for any flagrant partiality or illegality in their proceedings, they ought to be extremely delicate and cautious of rejecting any challenges or objections made by a prisoner, previous to the court's being sworn, without first admitting him to shew cause; because, upon a consideration of the reasons assigned for such challenge, if they be not sufficiently valid, a *majority* in opinion may always overrule the challenge, and afterwards proceed on the trial.

"A prisoner, however, may object to any officer sitting upon his trial at a court-martial, if that officer had previously sat at a '*Court of Inquiry*,' and had given his opinion upon the matter at issue. This constitutes a legitimate cause of challenge, and which it will always be the duty of the judge-advocate to anticipate. But it is by no means a valid objection to an officer becoming a member of a court-martial, that such officer had sat at a previous court-martial, on the trial of either the prosecutor or prisoner, implicated in charges connected with each other, or of a recriminating nature."

think proper to attend to the proceedings of the trial. The court then being "open," the judge-advocate, standing, reads audibly the order for assembling the court, and likewise the order or warrant of his own appointment. He then proceeds to call over the names of the president and members already ranged in the order of seniority, and administers to them* the oath prescribed by the statute for regulating naval courts-martial.

After the members of the court have been sworn in, the president proceeds to administer to the judge-advocate the following oath:—

"*I, A. B., do swear, that I will not, upon any account, at any time whatsoever, disclose or discover the vote or opinion of any particular member of this Court-Martial, unless thereunto required by Act of Parliament.* "*So help me* GOD."

The judge-advocate then reads the charge or complaint against the accused party, when the court may proceed to call the first witness in support of the prosecution, and the judge-advocate will administer to the witness the following oath, which is to be repeated aloud:—

"*I, A. B., do most solemnly swear, that in the evidence I shall give before the Court respecting the present trial, I will, whether it be favourable or unfavourable to the prisoner, declare the truth, the whole truth, and nothing but the truth.*

"*So help me* GOD."

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* The custom of the service sanctions this oath being taken collectively, each member repeating aloud the required asseveration. This mode of swearing-in the members, is adopted with a view to save time; but to impress an auditory with the solemnity due to such an occasion, the president of a naval court-martial has, before now, required of the judge-advocate to administer to each member individually the prescribed oath.

## WITNESSES TO BE KEPT APART.

ALL witnesses intended to be produced, either on the part of the prosecution, or in favour of the prisoner, should be kept apart, and no witness should be allowed to enter the court until called upon to give his testimony.

## OPENING OF EVIDENCE.

AFTER the witness has been sworn, the prosecutor puts his opening question to the deposing party, or the president may desire him to relate to the court what he knows respecting the charge or charges alleged against the prisoner. When the prosecutor has terminated his examination of the witness, or the latter has related his statement to the court, the members then, with the approbation of the president, may put individually such interrogatories as may be deemed necessary towards the investigation of the *truth*, and afterwards the prisoner may be permitted to interrogate the same witness. This in civil jurisprudence is termed "cross-examination."

## LEADING QUESTIONS.

LEADING questions should never be shaped in a manner which may have a tendency to *instruct* the witness in the answer he is to give, and which is to be recorded in the minutes of the trial. It is therefore improper, and contrary to precedent, for the prosecutor to put a question preceded by the negative particle *not*;* such as, "Did you *not* hear?" or, "Did you *not*

* The prohibitory particle appears only to be confined to the "examination in *chief*." The prisoner, in *cross-examining* the

see, at such a time, or such a day?" &c., because the particle *not*, as M'Arthur shrewdly observes, "obviously suggests to the witness the answer which the interrogator wishes,—namely, in the *affirmative*."

## DISPUTED POINTS.

If, in the course of examination, whether on the part of prosecutor, prisoner, or member of the court, the pertinency or propriety of a question be in any way doubted or disputed, the court should be *cleared*, and the adoption or rejection of the question decided by the majority of its members.

## RE-EXAMINATION OF A WITNESS.

Should the court, or judge-advocate, with the consent of the court, require a witness to be further examined, it is permitted to call in the same witness as often as it may seem essential to the attainment of truth. But it becomes questionable whether it be strictly legal to re-examine a witness after the prosecution or case of the prisoner has closed.*

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witnesses produced in support of the charge, the prosecutor in cross-examining those in behalf of the accused, and the members of the court in examining either, "can with propriety frame their questions with the negative particle *not*, and even blend them with collateral circumstances connected with the fact under investigation, so as the answers extracted from the witness may go to the whole truth, with every extenuation or aggravation of the offence."

It is not intended to dispute the propriety of not employing the *negative* particle in *cross-examination*; but the judge-advocate should point out to the court whenever ir rogations have a tendency to *prompt* an acute witness, or perplex a *agitated* party.

* At a recent court-martial, held at Portsmouth, on Lieutenant St. ——, of His Majesty's ship A ——, the right of re-examining

## WITNESSES SUMMONED BY THE COURT.

THE "Naval Regulations" permit a witness to be called in by the court, although that witness be not desired by either the accuser or accused; the only object of the court being to elicit fully every fact connected with the case under trial.

## HEAR-SAY EVIDENCE.

WHAT a stranger has been *heard* to say* is, in strictness, no manner of evidence, either *for* or *against* the prisoner. The justice of this rule is obvious, particularly when it is taken into consideration that such *information* is not upon oath, and that the party implicated is deprived the opportunity of cross-examination.

## WRITTEN EVIDENCE.

LOG books, muster books, official instructions, and government gazettes, are deemed to be admissible evidence; and instances stand on record, that threatening letters or documents, containing indecent or violent expressions, forwarded with a view to insult a superior officer, or even to quarrel with an inferior,

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a witness after the prosecution had closed was disputed. The question was referred to the crown lawyers, who agreed in opinion as to the validity of the objection taken.

* M'Arthur says, "that hear-say evidence may be made use of, by way of inducement or illustration of what is properly evidence."

The latter term employed by the above authority is by no means a clear "*illustration*" of his rule. The word "inducement" is more intelligible; still it will be always safest to reject *hear-say* evidence, unless it is made manifest to the court that such *information* will lead to the prompt production of *bonâ fide* evidence that can attest *facts*.

have been received by a court-martial as sufficient evidence to convict an offending party.*

## EVIDENCE TO BE CORRECTED BEFORE THE WITNESS LEAVES THE COURT.

As all *received* evidence is to be registered in writing, it becomes the duty of the judge-advocate to read aloud, in a clear and articulate tone, the testimony adduced by the witness, in order that the court, as well as the deposing party, may be satisfied such testimony be correctly recorded. Should there be any desire on the part of the witness to amend, explain, or make clear his evidence,† the judge-advocate should

* Several cases might be cited in support of the reception of such evidence. One will suffice; and is here adduced in preference to the numerous instances which stand on record relative to anonymous letters from the fore-mast men of the fleet. In the year ——, Lieutenant M —— x, of His Majesty's ship L ——, was tried by a court-martial for having written a letter containing insolent and infamous expressions respecting Captain P——, his commander. The hand-writing of Lieutenant M. was proved to the satisfaction of the court; and this documentary evidence was the only evidence that could be produced in support of the prosecutor's charge. The wisdom of admitting such evidence as that above cited is manifest; for were not written documents of this nature, when proved to be the hand-writing of the accused, to be received as admissible evidence, there would be no possible means of punishing parties who, from malicious motives, may indulge in this unmanly and unconstitutional mode of assailing the character or maligning the reputation of a superior in office.

† In civil jurisprudence, counsel are apt, in cross-examining a witness, to impeach his credit on apparently contradictory matter. On such occasions, Lord Mansfield was wont to interpose, saying, "Would you have the witness perjured, because *he will* not be *perjured*, but corrects himself, like an honest man?"

intimate such desire to the court before the witness withdraws.

### WITNESS, CREDIBLE AND COMPETENT.

"THE members composing a court-martial, who act in the double capacity of judges and jurors, should weigh well the *credibility of a witness*. Should the prosecutor, or party accused, take exceptions to the *competency** of a witness, it will be for the court to decide their validity. But, the exceptions are to be publicly stated, and inserted in the minutes of the proceedings."

### PROSECUTOR'S TESTIMONY.

THAT a prosecutor should be entitled to give evidence in support of the charges brought against a prisoner, is perfectly admissible. On similar principles of justice, the person accused may call on the prosecutor to give evidence to facts in exculpation of the charge, as well as to the general conduct and tenor of his character; and the prosecutor may also be called upon to produce records or documents of any kind, which may be deemed necessary for the

* "No two terms have been more frequently confounded, and, consequently, less understood, than those of *competent* and *credible*, as far as relates to witnesses. A witness is properly said to be *competent*, whenever he can be examined before a court; his *competency* is a question of *law*, to be determined by the judge previous to his giving evidence in the cause. If the *law* permit him to be examined, his *credibility* forms the most important part for the consideration of a jury; and they must decide on this, according to the opposing or corroborating circumstances of the case."—*M'Arthur.*

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prisoner's defence. When the privacy* of the offence is of such a nature as to exclude the possibility of having more than one evidence, it is customary to admit such testimony, as being *competent in law to convict* the party accused.

### SITTING MEMBER—A WITNESS.

IT is essential in this place to define the difference which exists between the evidence of "an interested party,"† and that testimony which may be adduced, and received, by a member composing the court.

It frequently happens on foreign stations that no more officers can be collected than is sufficient to constitute a court. Circumstances may therefore arise in the course of a trial to render the testimony of a sitting member, whether in favour of the prosecution or the party accused, most essential evidence. And

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* "Lieutenant Thackeray, of His Majesty's sloop 'Thorn,' was tried at a court-martial, held in January, 1789, on several charges exhibited against him by Capt. William Taylor; and, amongst others, for going into the captain's cabin, when alone at sea, and calling him *scoundrel and liar*. The privacy of this offence excluded all other positive evidence but that of the prosecutor; and when the court assembled, Captain Thompson, the president, had his doubts of the propriety of the court's admitting Captain Taylor to give his evidence. The court was, therefore, adjourned, until they had counsel's opinion on the point. The substance of which was, that, in criminal cases, it is not a legal objection to the competency of a witness, or to the admissibility of his evidence, that he is the prosecutor, whatever objections to his credit may arise under the circumstances of the case.

"The court afterwards re-assembled; the prosecutor's evidence was admitted, and Lieutenant Thackeray was deprived of his commission."—*M'Arthur.*

† Vide "Naval Instructions."

as the investigation of *truth* is the only object in view, "it does not," says M'Arthur, "seem incompatible with the principles of law or of equity, that such a member (who sits in the united capacity of judge and juror) should be sworn in open court, and, after having given his testimony on the matter at issue, resume his seat, like a juror. But it may not be improper to observe, that a court, in judging of the innocence or guilt of a prisoner, is by no means to be *influenced* by any report or *opinion* of any member or other person, not given *publicly* in *evidence*, whatever may be the respectability and the accuracy of him from whom the information is received."

## LAW OF EVIDENCE.

POSITIVE PROOF is always required where, from the nature of the case, it appears it might possibly be had.* But next to *positive* proof, *circumstantial* evidence, or the doctrine of *presumptions*, may take place; for when the fact itself cannot be demonstratively evinced, that which comes nearest to the proof of the fact is the proof of such circumstances which either necessarily or usually attend such facts; and these are called presumptions, which are only to be relied upon till the contrary be actually proved. *Violent* presumption is often equal to full proof,† where those circumstances appear which necessarily attend and are incident to the fact.‡

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* Blackstone's Commentaries, vol. iii. p. 371.

† Coke upon Littleton, p. 6.

‡ If a man be found suddenly dead in a room, from a wound by a sharp instrument, and another be found running out in haste,

CIRCUMSTANTIAL OR PRESUMPTIVE EVIDENCE.—In such cases, it is necessary that all witnesses be persons of *unimpeachable* veracity, as it is possible the prisoner may be innocent of the crime. In evidence of this kind there is great room for doubt as to the guilt of the prisoner; and it is a principle in law, that, in every case of *doubt*, a court should lean to the merciful side, and acquit.

## OPINION AND BELIEF.*

"QUESTIONS of *opinion*" are sometimes put to witnesses which lead to considerable discussion as to the power of the court to compel the interrogated party to depose his *opinion*. M'Arthur says, "when a question is put generally by a prosecutor, or any member of the court, as to the witness's *opinion* of the accused performing, at the time specified in the charge, the duty imposed upon him negligently, or not doing his *utmost in battle*, such witnesses may, from delicacy, *decline* giving any opinion in his evidence; he need only answer to every question of *fact*, because the *opinion* of a witness on the culpability of a prisoner

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with a bloody sword, this is a *violent* presumption that he is the murderer; for the blood, the weapon, and the hasty flight, are all necessary concomitants to such a horrid act; and the next proof to the sight of the fact itself, is the proof of those circumstances that do thus strongly indicate the fact. But this *alone* would not be sufficient to convict a man of murder.

* A witness, when under examination in chief, must not depose as he "*thinks*" or "*believes*;" he must swear from the knowledge of the *fact*. But his *belief* is evidence on the *cross*-examination, whether examined on the part of the crown, or of the prisoner. This, in civil jurisprudence, is a received rule. But at naval courts-martial a matter of *belief* is seldom admitted as evidence.

ought not to be admitted as evidence to influence the judgment of a court-martial. There are, however, cases* in which members of a court-martial, or the prisoner, in cross-examination, may desire the *opinion* of a witness.

## DEFENCE OF PRISONER—HOW CONDUCTED.

THE court "having gone through the examination of all the witnesses in support of the charge, and allowed the prisoner to cross-question them severally, he is then put on his defence; which, if already prepared, he is allowed to read to the court, or he may dictate it to the judge-advocate, in order to its insertion in the minutes. But should the trial be of importance, and a variety of circumstances have been brought forward, upon which the prisoner was unprepared, he may, upon soliciting the court, be indulged with an adjournment until a subsequent day, for the purpose of the better preparing himself for his defence, and the examination of his witnesses in support of what he may have occasion to affirm."

* "For instance, if an officer be tried on a general charge of disobedience of orders, or of contempt of his superior,—of being drunk on duty, or behaving in a scandalous or infamous manner, as is unbecoming the character of an officer and a gentleman, &c. Any question of opinion put to a witness by the court or prisoner, relative to the particular conduct of the accused in these cases, may be highly proper and necessary; and the court usually determine on the propriety of their being asked and answered." A witness may be also required to state his *opinion* touching the operations and evolutions of a fleet, or of the order and discipline of a particular ship.

## WITNESSES IN SUPPORT OF DEFENCE.

AFTER the prisoner has made his defence, "the witnesses in support thereof are to be separately called into court, sworn and examined, the prisoner first asking them such questions as he may deem material, whether to invalidate the prosecutor's evidence, or to establish his general character and good behaviour. He is to be allowed to produce written documents, either in his exculpation, or as to character and good behaviour.

"The examination of the prisoner's witnesses* is conducted in a similar manner to that of the evidence for the prosecution. When the prisoner's interrogatories are ended, the members of the court, or judge-advocate, may put such questions as appear to them proper for bringing out the truth. The prosecutor is generally allowed to cross-examine the witnesses upon the points brought forward by the prisoner, but he is by no means to introduce new or *extraneous* matter; and, after that, the prisoner may again put any additional interrogatories to his witnesses. The evidence being then closed, and having nothing further to offer in his defence, the court is cleared, that the members may proceed to deliberate upon the judgment to be pronounced."

* "The counsel or *advising* friends of the prisoner may be permitted to assist him in shaping questions as they arise. Such questions are to be written on separate slips of paper, and only to be delivered to the judge-advocate by the hands of the accused. If the question be approved, the judge-advocate reads it aloud to the witness, and inserts it, with the answer, *verbatim*, in the minutes of the trial."

## DELIBERATION OF EVIDENCE.

"THE evidence on both sides being closed, it remains for the members to deliberate upon the evidence produced for and against the prisoner, and to take into mature consideration the palliating circumstances, either offered in his defence, or which may have arisen in the course of the investigation. When they are fully prepared, the judge-advocate states the question respecting the prisoner's guilt, and which at naval courts-martial is put to each member separately, beginning with the junior, and ending with the president, and is usually couched in the following words:—"Are you of opinion that the charge against the prisoner is *proved* or *not proved?*" Or thus, "Is he guilty or not guilty of the crime laid to his charge?" Should the majority of members be of opinion that the charge is proved, those members are to assign the punishment to be inflicted upon the prisoner; and it is to be observed, that, in order to give force and validity to the judgment of the majority, the sentence of a naval court-martial is to be signed by every member of the court, by way of attestation, notwithstanding any difference of opinion there may have been among them."

# SURGEON.

## PRELIMINARY REMARKS.

If the services of a medical man are a great blessing on shore (and few will dispute the fact), how inestimable must they be deemed afloat, when the vessel is far removed from land and its numerous resources?

Few considerations indeed more forcibly, and at the same time more favourably seize upon the minds of men-of-war's men,* than the knowledge that the ship possesses a surgeon, whose professional skill is equalled by his unremitting attention and consolatory kindness to the sick.

* Men-of-war's men always appreciate medical attention.

# GENERAL DIRECTIONS.

## EARLY DETECTION OF DISEASE.

EARLY detection and early treatment of disease being the first essentials towards its speedy and effectual cure, the surgeon should particularly impress upon the minds of the petty officers, seamen, and marines, the necessity of *timely* * intimation in all cases of complaint.

## FEBRILE SYMPTOMS.

WHENEVER, in the treatment of febrile disease, symptoms are discovered which give rise to the slightest suspicion of the complaint having been

* The surgeon should interrogate uch of the ship's company whose personal appearance indicate malady or predisposition to sickness. Such solicitude on the part of the surgeon is always taken as intended, and is sure to beget "good will," and command respect for the medical office.

produced by infection, the surgeon should immediately communicate the circumstance to his commander, in order that proper precautions * may be promptly taken to prevent the risk of dissemination.

## VISITING THE SICK.

THE surgeon is required to visit the sick twice in the day. His own anxiety and solicitude for sufferers will suggest to him the propriety of repeated visits; and he should exact from his assistants the closest attention to all patients in a precarious state, reporting to him aught of alteration in the symptoms of each particular case.†

SICK LIST.—This officer, after visiting the sick, is required to deliver daily to the captain a list of

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* "When men are taken ill of fever of an infectious nature, they should immediately be stripped on entering the sick berth, and, if practicable, washed with soap and warm water; their linen should be changed, and the patients placed in a bedding allowed for the use of the sick. Care should be taken that the clothing and bedding of the sufferer be immediately immersed in boiling water."—*Instructions.*

† In all cases (for there are a variety incidental to the seaman's situation and mode of life) which depress the spirits of the patient, it should be the study as well as the duty of the surgeon to soothe and cheer the afflicted by the most humane attention, and by every expression of consolatory kindness; to hear, with patience, all complaints, and redress all real grievances. Such conduct will at once inspire the sick with confidence, exhilarate their spirits, and materially tend to hasten the restoration of health.

all those who are incapable of performing their respective duties. At the same time he should offer to the captain such suggestions as may tend to ameliorate the condition of his patients.

## SICK RETURNS.

THESE "Returns" should accompany the "Weekly Account;" and upon all occasions when it is necessary to present the latter document to a senior officer, the surgeon should be prepared with the "sick report."*

## INSPECTING THE SICK UNDER THE HALF DECK.

THE practice of parading the sick under the half-deck in the presence of the captain, is one that might be "more honoured in the breach than in the observance." Doubtless the custom was originally adopted with the best possible intentions, but good intentions are not always followed by good effects. Sick men seek repose, and no sympathy, however plausible in appearance, can com-

* In meeting a senior officer at sea, it frequently happens that the captain is delayed in proceeding to pay his respects to his superior, in consequence of the surgeon not having filled up the official formula required upon these occasions. In naval, as well as medical matters, "delays are *dangerous*."

pensate for the annoyance and worry of being disturbed.

## DISCRIMINATION IN DETECTING SKULKERS.

THE idea that seamen of the service are often disposed to seek surgical relief under "false pretences," is not justifiable. That the "*jail birds*" of former days used to impose upon medical credulity, few will attempt to deny. But the surgeon should rather appear to believe the complainant's statement, than permit any hasty ejaculation to escape him, even though he may have strong reasons to suspect the motives of the appealing party.* The surgeon, in fact, should economize his suspicions, and keep them to himself. A medical man *may* be mistaken, and a solitary instance of erroneous decision is not only calculated to bring

* If the surgeon is not devoid of professional tact, he will adopt medical means to punish the party in a manner that will at once expose the deception, and *cure* the culprit. The penal part of the prescription should be kept out of sight; no martial *interrention* should be called in aid of medical treatment. Threats of turning the patient over to the captain, or the first-lieutenant, should never be resorted to—it savours of "bad practice," and bespeaks little for the science of *physic*. The "Materia Medica" and the "Articles of War" are not to be pounded in the same mortar.

into disrepute the professional skill and sagacity of the surgeon, but to engender a feeling of dissatisfaction afloat, and, what is equally bad, to induce a general *disinclination* to seek medical aid, when medical aid is in *reality* required.

## JOURNAL, AND CASE BOOK.

A JOURNAL is required to be kept by the surgeon, in which should be daily inserted the name, age, station, and disease of every individual under medical treatment, noting the description of diet, and remedies prescribed for the patient.

"*A Case Book*" becomes also a necessary record,* which should be regarded as a register of the symptoms, treatment, and result of all extraordinary and interesting cases of disease, with such remarks as subsequent investigation or reflection may furnish.

* The surgeon will do well to impress upon the mind of his assistants, the advantages to be derived from each keeping a record of this description—to wit, "the *Blane* Medal."

# FIRST COMMISSIONING.

## INSPECTION OF INSTRUMENTS.

Upon joining his ship, after reporting himself to the captain or commanding officer, the first duty of the surgeon is to submit his surgical instruments to the inspection of the physician of the fleet, or to other appointed authorities.* He will also be held responsible that the instruments which his assistants are required to provide are complete and in perfect repair.

## FITTING UP SICK BERTH.

The surgeon should overlook the artificers of the dock-yard when employed in framing and fitting-

* If there be no physician of the fleet employed, the inspection of instruments will take place at the Naval Hospital, by the surgeons of that establishment.

up the sick berth. Various are the *costless* accommodations which, for the comfort and convenience of the sick, may be pointed out to the "*Foreman afloat*," which may be furnished and fitted by that authority without at all infringing the much-dreaded law of "*Establishment.*"*

## EXAMINATION OF NEWLY-RAISED MEN.

THE persons of newly-raised men should be carefully examined by the surgeon. This duty is too frequently delegated to the "assistant." In cases of "survey," the surgeon may be "called to *account*" touching the reception of unserviceable subjects.

## ACCIDENTS.

IT invariably occurs that, during the first month of the commissioning of a vessel-of-war, more ac-

* The tender sympathies of the shipwright are seldom manifested in favour of the seaman, sick or sad; nevertheless, there are worse *landsmen* doomed to "walk the waters" than the "foreman *afloat.*"

The surgeon should also bear in mind that shipwrights and builders "bore," when it be desired to "get at" the soft *spot.* This, in technical parlance, is termed "tasting." May not the medical officer proceed upon the same principle,—"taste" the temper of the mortal "stuff," and "*bore*" gently, till he "gets at the *soft* spot" of the accommodating mechanist.

cidents happen than at any other period of a ship's service. Possessed of this fact, the surgeon, during "*working hours*," (though contrary to the too prevalent practice of this officer,) should not leave the ship.*

* It should be borne in recollection, that in the two principal ports where naval hospitals are established, the *tide* will not always admit of conveying men who may have received serious hurts in the hold, or compound fractures from falls from aloft.

# IN PORT.

## RE-SUPPLY OF MEDICINES.

When a renewed supply of medicines and necessaries is required for the use of the sick, the surgeon is officially instructed* to "take to the hospital the chest which is sought to be completed," together with its "*remains.*"† "All demands for medicines and necessaries, (excepting in cases of real emergency, the nature of which is to be expressed on the "demand") are to be made in time, to pre-

* Vide "Instructions."

† As His Majesty's ships are now fitted with *fixed* dispensaries, it is presumed that the dispensor of the hospital will *dispense* with the necessity of landing the "remains." This has always been held as a very inconsiderate "*check*" to medical relief. If a casualty occur afloat, and the "*chest*" be on *shore*, how, be it asked, is the sufferer to benefit by the *missing* "remains"?

vent inconvenience to the hospital, by their being delayed till the ship is about to sail; and they are to be delivered at the hospital before three o'clock in the afternoon; and no articles are to be returned into store after that hour."

## INQUIRY AFTER PATIENTS ON SHORE.

During the detention of the vessels in port, the surgeon should avail himself of every opportunity to visit the sick of the ship, who may have been sent to the hospital, or sick quarters, for cure; and he should endeavour to ascertain, for the information of the captain, whether the patients are so convalescent as to rejoin* the ship before she sails.

## OPERATIONS AT THE HOSPITAL.

This officer, when his services can be spared from the ship, should avail himself of every opportunity to attend at the naval hospital when a surgical operation is to be performed. The precise period is always intimated by signal.

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* Independently of the necessity of ascertaining a point so essential to a ship, possibly "short-handed" already, the sick on shore will always attribute such inquiry to professional solicitude, and personal kindness on the part of the surgeon.

## CONSULTATIONS.

THE surgeons of the service seldom convene for the purpose of consultation. It frequently happens that vessels-of-war are collected at the same anchorage, in the vicinity of which there is no naval hospital, nor establishment for the recovery of sick and of wounded seamen. Under these circumstances, and more particularly when severe sickness or dangerous disease prevails afloat, it is the duty of the doctor to call in medical aid. A telegraphic communication can readily announce this desire, and can always convene the surgeons of the squadron to meet in consultation* on board of the ship required.

* Possibly the disinclination manifested by the faculty to consult afloat may proceed from mistaken notions of *delicacy*, added to the desire of sparing brother officers a "*long pull*," and particularly the pain of *not* "pulling together."

# AT SEA.

## DIET OF THE SICK.

In regulating the diet* of the sick, the surgeon should impress upon the mind of the patient, that the substitution of *wine* for spirits is not (as seamen too generally imagine) to be considered in the light of a *penal* draught,—but that, on the contrary, the lighter liquor is prescribed with a view to hasten, instead of to retard, the restoration of health. Should the ship be supplied with "preserved meats," the surgeon should "demand" from the purser a sufficient allowance for the support of patients in a delicate state.

* Upon all occasions that fish be taken in the haul, the surgeon should be careful that the sick be *first* supplied.

## WARMING AND VENTILATING THE SHIP.

It is the duty of the surgeon to acquaint the captain whenever he may deem it necessary to light stoves, and otherwise ventilate the lower deck.—Vide *Carpenter*—"*Pump-well.*"

## TIMELY CHANGE OF SHIP'S COMPANY'S CLOTHING.

"Change of climate, change of clothing," should be received as a medical maxim. Crews of ships returning from foreign stations frequently suffer from catarrhal, pulmonic, and rheumatic complaints, arising solely from a deficiency in warm clothing. When the ship is destined to return from a warm to a cold climate, measures should be taken to provide an adequate stock of suitable slops.

## CLEARING FOR ACTION.

Amputating operations are only to be accelerated by a ready arrangement of the required instruments and surgical "appliances."* Care should be

* A distinguished medical officer has recently invented a *portable* amputating table, which is made to contain all the instruments and apparatus requisite for *ready* operations. It is very light, and can be carried from the cockpit to the sick bay by two men.

taken that the locality of the cockpit be perfectly clear, that a proper proportion of lights be securely placed, that a sufficient supply of fresh water be ready at hand, and that tourniquets be distributed on the different decks,* and conveyed aloft to the people stationed in the tops. Should there be a paucity of tourniquets in the ship, the surgeon should cause a temporary number to be made.

* On the occasion of a "general exercise," the surgeon and his assistants are recommended to go round the different decks, for the purpose of shewing seamen and marines the utility of the tourniquet, and manner of applying it.

# MASTER.

## PRELIMINARY REMARKS.

THE qualifications required in this officer are by no means few, and, indeed, are seldom possessed by one individual. It will not be denied that it is less difficult to find a representative of any other station in a vessel-of-war, than to obtain what is professionally termed a "good master." In him should be concentrated the knowledge divided amongst the other officers, both warrant and commissioned. He should be a thorough seaman—a practical rigger—accustomed to stow and distribute the ballast of a vessel to the best advantage—a proficient in every branch of common navigation—be competent to take, with precision, "angular distances, terrestrial and celestial," to "procure rates"

for chronometers, to undertake their care and management, and, finally, to be sufficiently acquainted with the theory and practice of marine surveying to enable him to complete a correct survey of a strange port, or an unknown coast; and to these attainments he should add a character of nerve and decision.*

* "More depends," said a celebrated admiral, when eulogizing the merits of a well-known master—"more depends on the conduct and ability of this officer, than on any other in the ship. If the first-lieutenant be called the captain's right hand, the master may be said to be his right arm,—ay, and right leg; for he can scarcely move without him."

How few officers are now to be found deserving the admiral's eulogy!

# GENERAL DIRECTIONS.

## HOLDS, PROVISIONS, AND WATER.

THE provisions and water being entrusted to the custody of the master, he will be required to account for the daily expenditure of the water, and to use every possible precaution in the preservation* of the provisions and victualling stores.

## INSPECTIONS.

OF CABLE TIERS.—The master should constantly inspect the cable-tiers, and see that they be kept perfectly clear and well ventilated.

OF STANDING & RUNNING RIGGING.—The

* Care must be taken that the *dry* provisions be not stowed *under* the wet, and that the *old* supplies be placed uppermost, and issued *first*.

master is required to inspect constantly the state of the standing and running rigging, and to report to the captain or commanding officer upon all occasions that the former may "need setting up," or that the latter may appear unserviceable and require renewal.

OF STORES AND STORE-ROOMS.—He should see that the store-rooms contain nothing but the stores of the ship, and that each article is placed in its assigned position.

The Master will also be required to inspect the expenditure, and to examine the rough books of the warrant officers, at least twice in the week.

OF SPARE SAILS.—Vide *Mate-of-the-lower-deck*, under the head of "Spare Sails;" also, *Boatswain* —"Inspection of Spare Sails."

HALF YEARLY INSPECTIONS OF CHAIN CABLES. —Vide *Boatswain.*

## SHIP APPROACHING THE SHORE.

WHENEVER the ship is in the vicinity of the land, and particularly standing with her *head* to the shore, the master is cautioned to keep the *hand-lead* "going in the chains."

Should there happen to be a pilot on board, and should overweening confidence or idle vanity induce a desire on his part to withdraw the leadsman from the channels, the master is particularly cautioned to oppose* the pilot's desire.

## ANCHORING WITH CHAIN-CABLES.

THE anchor is frequently fouled in the very operation of "letting *it go*," the weight of the chain-cable causing the running-out part to fall over and foul the stock. To avoid a mishap, replete with such mischievous tendency, some officers pursue the practice of "letting go" the anchor with the cable *bitted*.†

## STAYING MASTS.

THE practice of "staying masts with the wedges in" has been already deprecated, as contrary to every received system of "*seamanship*." The stays may be set taut "with the wedges in," but the

* In these cases courtesy must succomb to caution, though indeed the refusal may be couched in terms to avoid offence. "Pilot, my instructions will not permit me to comply with your request." Such intimation will prevent reply, and unnecessary argument. Parleys are not to be courted in "pilotage waters."

† Objection may be made to this practice, from an apprehension that the links of the chain-cable would "nip," and not "render," or run round the bits: experiment proves the reverse.

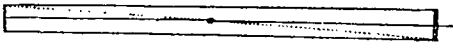
masts should be always "free" in the partners whenever there is occasion to alter the *position* of their "*standing*."

## COMPASSES.—MAGNETISM.*

"THE master is recommended to make careful observations on shore with all the compasses supplied to the ship, in order to ascertain correctly the *error* of each.

"This error is occasioned by the magnetic axis of the needle not coinciding exactly with the axis of form.

"In every needle the axis of form is represented by a straight line drawn through the centre of the needle thus—




whilst the *magnetic* axis of the needle is seldom, if ever, precisely in the same line, but may be represented by the dotted line passing along the needle, and the error of which is the angle formed at the intersection of those lines in the centre of the needle.

"Now, as the needle is attached to the card

* The annexed remarks are from the pen of the scientific Captain James Clark Ross, nephew of Sir John.

according to its axis of form, that is to say, the axis of form is placed so as to coincide exactly with the north and south points of the card, it consequently must take its direction from the magnetic axis, and therefore the cause of the error becomes obvious.

"It is also recommended that the use of two compasses in the binnacle be *abolished*, as the action of each on the other is frequently a cause of considerable error, varying in amount according to their relative magnetic positions. With the ship's head at north or south, there can be no error, since the south poles of the needles have the same power of repelling each other as those of the north; and, therefore, no deflexion can be produced; but when the vessel turns toward the east or west, the south-end of one compass approaches the north end of the other, and the effect produced, by mutually attracting each other, is to make the vessel appear to be steering more to the east or west than is really the case. The amount of this error will increase as the vessel continues to turn more to the east or west, and will be equal in both compasses, so that whilst they appear to be correct, from exactly agreeing in their indications, they may

both be wrong to so large an amount, as to lead to very injurious or, perhaps, fatal consequences.

LOCAL ATTRACTION.—"But the most important point to which it may be necessary to call the attention of all officers, is the very great amount of error occasioned by the attractive power of *iron** contained in the vessel; more especially in high magnetic latitudes. The exact amount of deviation produced by this cause should be carefully determined. To neglect of this necessary precaution, the loss of many valuable vessels may be traced.

"It is therefore recommended, that the azimuth compass be kept constantly fixed in a spot as remote from any immediate attraction, as far from the binnacle compass, and as conveniently placed for frequent comparison with it, and for observations, as possible. By means of this

* Much time and trouble may be saved, and greater accuracy secured, by the application of the very ingenious contrivance of Professor Barlow, of Woolwich, for counteracting the effect of local attraction, by affixing an iron plate of considerable surface in such a position from the compass as experiment may prove to be proper. This valuable invention is not yet duly appreciated, although it may be safely asserted that every captain who chooses to apply for it may be supplied from any of the dock-yards; and the directions which accompany it are so simple, and easy to be followed, that no difficulty can occur in its application.

*standard** compass, the variation is to be observed with the ship's head directed to each different point, and, the true variation having been previously ascertained on shore, the deviation produced by the iron in the ship on that compass may be readily eliminated, and the point of no deviation determined, as in the following example :—

*Variation observed ashore*, 27° *W.*

| | | Deg. | Min. | | Deg. | Min. |
|---|---|---|---|---|---|---|
| Ship's head N.E., | variation obsd | 24 | 20 | deviation | 2 | 40 |
| E. | „ | 19 | 10 | „ | 7 | 50 |
| S.E. | „ | 23 | 0 | „ | 4 | 0 |
| S. | „ | 27 | 0 | point of no deviation | | |
| S.W. | „ | 30 | 10 | „ | 3 | 10 |

" The point of *no deviation* will continue the same under all circumstances, (if no considerable change be made in the distribution of the iron in the ship,) but the amount of deviation will diminish as the vessel approaches the magnetic equator, and increase as she recedes from it. It will therefore be necessary to repeat these observations as often as any very considerable change occurs in her mag-

* In long voyages it is absolutely necessary that the variation be frequently ascertained by the standard compass, and that the ship's course be always recorded by it, using the compass in the binnacle only as a guide to the helmsman, after it has been carefully compared, by the officer-of-the-watch, with the standard.

netic latitude. The process then becomes very simple; for the point of *no deviation* being known, it will be necessary only to place the ship's head upon that point, and observe the bearing of any very distant object, and the difference of the bearing of that object, with the ship's head in any other point, will be the amount of deviation due to that point. Thus, ship's head south, (being the point of *no deviation* before observed,)—a lighthouse bore, S. 52 deg. 15 min. E.—ship's head S.W. at bore, S. 45 deg. 45 min. E.; deviation, 6 deg. 38 min.; shewing an excess of westerly variation to that amount, and an increase of deviation of 3 deg. 20 min. since the preceding signs were made.

" By making observations on the points of greatest deviation, the intermediate points may be estimated by approximation when observations upon all the points cannot be conveniently made.

## CHRONOMETERS.*

" CHRONOMETERS are usually sent abroad with a 'rate' that has been procured for them at the

* The subjoined observations have been transmitted to the author by that scientific and distinguished officer, Sir John Franklin.

maker's, or at some establishment on shore; but as a change of position and of temperature generally affects their respective rates, care should be taken, as soon as possible after their shipment, to ascertain, by *observation*, whether any, and *what* change has been produced by their removal from the shore.*

LOCAL POSITION.—"Chronometers should be placed in positions of the vessel in which they may be as little as possible exposed to concussion. The practice of placing chronometers in cots suspended from a beam is now very generally disused. In such situations they are exposed to vibratory shocks, consequent on the general operations of the ship's duties, as well as the motion of the vessel, which, in a heavy sea, is frequently greater than can be counteracted by the gimbles; neither is the position of the rudder-head recommended. In that extremity

* At Portsmouth or Spithead, and in the River Thames, within view of the Greenwich *Observatory*, this can be done by attention to the "dipping of the ball;" but even in sight of the Observatory, the master is recommended to ascertain the fact by his own observations, if it were only for the sake of practice, and to procure sights for the longitude on leaving the anchorage, while some well-fixed point is in view, that he may be certain he commences his voyage with a knowledge of the state of his chronometers. Officers trusting entirely to the correctness of the rates of time-keepers taken from the shore, have often had their confidence shaken, after they had been at sea a few days, by finding the rates changed.

of the ship the motion is severely felt; and in warm climates, especially, it frequently happens that, from the warping of the wood, the rudder-head becomes extremely loose and jarry; besides, when kept in the after-cabin, chronometers are liable to be shaken by servants, when in the act of cleaning their cases.*

WINDING-UP THE CHRONOMETERS.—"In this operation the greatest care should be taken to avoid its completion with a jerk. A sudden jerk will inevitably cause an alteration in the rate of the watch; an evil which can only be avoided by "the winder" counting, as he proceeds, the number of turns, and effecting the last revolution with a more steady and gentle hand. The number of turns required to wind up each chronometer should be distinctly labelled and affixed to the box, in a position to strike

* Chronometers should be kept in a box lined with baize, padded with wool, and either loaded with lead, or screwed down on raised cleats. The box should be divided into as many partitions as there are chronometers, and each partition well padded. This box should be placed in some part of the ship seldom frequented, yet easy of access; the lower down, and the nearer secured to the middle planks of the ship the better—the centre planks being formed of oak, and consequently less "springy" than those of fir. In frigates, the master's cabin is considered to be the best and most secure position in which these time-keepers can be placed.

the eye of such officers who may be deputed* to wind them up in the absence of the master.

"If there be more than one chronometer on board, the best should be considered as the standard, and with the best watch the others should be daily compared, registering such comparisons.

TAKING SIGHTS.—"The master should be provided with a sextant, and a good watch, possessing a 'second hand.' Before and after taking sights, the watch should be compared with the chronometers. Every master should supply himself with an artificial horizon. It is customary with this officer to be satisfied with having obtained the longitude by chronometer once a-day. But observations, if practicable, should be made both morning and evening, and each to be taken as far from noon as can well be procured with accuracy. Except during the winter season, or when the meridian

* "The persons deputed to undertake this duty, when the master may be employed on other service, should also be required to be present upon all occasions when the chronometers are to be wound up. Another cause of the change in the rate of a pocket-watch proceeds from the thoughtless and inconsiderate habit often pursued by the inexperienced winder, of turning the watch as well as the key, pending the operation of winding up the piece. The key only should be turned, whilst the watch be held firm and steady in the hand."

altitude is not high, the altitudes '*for time*' should not be lower than 15°, nor, on any occasion, need they exceed 25 or 30 degrees. The mean of three or five 'sights' should be used, and, in every case, when the morning sights are not more distant than four hours from noon, the observer is recommended to note the sun's 'bearing' at the time, in order that he may insure one data for a double altitude. He can procure the other, if requisite, which should be as near *noon* as possible."*

PROCURING RATES.—"Where there is not a 'transit instrument,' the best method of procuring rates is by equal altitudes of the sun, taken on shore with a sextant and artificial horizon. Though not to be compared with the above method, rates may be procured by means of single altitudes of

* The adoption of this practice cannot be too strongly recommended, especially when cruising in the vicinity of the British Channel, or in localities where the knowledge of the latitude becomes a desideratum. The methods of Mendoza Rios and of Dr. Inman produce accurate results: their calculations depend, not as others do, upon the latitude by dead-reckoning. If the morning observations be taken at a period too distant from noon, let others be taken at a proper interval from that time. It will generally be found, by using the precaution of procuring a "sight" and time together with the sun's bearing, shortly after noon, that by such means, together with "the evening sights," the latitude may be more accurately obtained than by any possible computation depending upon "the log."

the sun, observed in a similar manner either in the forenoon or afternoon, and to be taken at the same time on each day as nearly as possible. The rate may be deduced from a series of either of these observations, bearing in mind that, in the deduction, the morning and evening sights are not to be confounded. The rates found by each set separately may be added together, and the mean used, unless the results materially differ and there is reason to believe that the one series was taken under more favourable circumstances than the other; under such circumstances, of course, the result of the former must be considered as the rate.

The rate may also be obtained, the less accurately, by a series of daily observations with the natural horizon, provided the corrections be duly made for the state of both barometer and thermometer; which, indeed, should be made for every observation. Their errors for Greenwich time should be reduced from the latest sights that are considered to be good.

## REMARK BOOK.

Vide—"*Printed Instructions.*"

# FIRST COMMISSIONING.

## STOWAGE OF BALLAST AND TANKS.

THE errors which have perpetually arisen in the process of stowing vessels are attributable, on the one hand, to too implicit a reliance on certain fanciful hypotheses, and, on the other, to a rash disregard of principles, and a confidence in mere experiment and precedents; which latter, if more accurately investigated, would often be found inapplicable to the particular case for which they were adopted as guides. Mere theory, then, will not always suffice, neither will experiment, unaided by fixed rules. To establish these so as to be available when modified, and put in force by intelligence and general observation, is the great desideratum. A person who should undertake to

furnish such rules, should be one deeply versed in the higher order of mathematics, and gifted with the faculty, too rare among professors of the abstruse sciences, of clearly imparting their knowledge, acquired by these researches. Possessed of these, a seaman, if he be also a man of ordinary intellectual sagacity, will be able "to pluck out the heart of the mystery," which, to our great reproach*

* It is singular, in a maritime nation like this, how little understood is the science of stowage, though indeed it amounts to a libel on science to designate as such a process which, up to this hour, is rashly made to depend less upon fixed principles than speculative opinions; for, surely, if stowage be considered in the light of a science, and if the naval architect can construct and complete a vessel purporting to possess certain properties, the builder should be competent to lay down positive data for the guidance of her stowage. The constructor, it is true, "*calculates*" upon the trim of the vessel; but what rules does he lay down for her stowage? If competent directions were established, what necessity would there be for that article, in "the Naval Instructions," requiring the master of the ship "*to consult with the master shipwright of the dock-yard, on what may be the best manner of stowing the ship*"? This official mandate is a manifest admission, that no specific rules are laid down by the constructor of the vessel to govern her stowage. The words "*best manner*" speak volumes. It will also be seen, that the same official injunction directs the master of the ship to consult a party who, probably, has no more knowledge, touching the vessel's construction, than that possessed by the *consulting* officer. For example—a ship is built at Milford, and, after being launched and jury-rigged, she is ordered to Plymouth to be put into commission. The master shipwright of that port, together with the master of the ship, both strangers to the newly-launched vessel, are the party deputed to project the plan of her stowage, whilst the projector may affect displeasure, though, in

(not to say loss) as a maritime nation, has so long brooded over one of the most important branches connected with nautical science.

But to achieve something like a successful stowage, it is highly essential that the stower be thoroughly acquainted with the vessel's construction, capacity, trim, recorded "qualities," and, above all, the *builder's* "centre of gravity of displace-

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reality, delighted that authorities entrust to strangers "*the best manner of stowing the ship.*" And why? Because, in the event of failure, the architect can always attribute to the "bungling of the ballast" that which in reality should be set down to his own botching as a builder. Every builder should be compelled to supply rules for the stowage of the vessel he constructs. Till this be the case, stowage *never* can become a *science*.

Upon the subject of "stowage" volumes have been written by the Pseudo-scientific. Indeed, upon this theme, as much paper has been "expended" as would serve to sheath all the line-of-battle ships employed upon the Peace Establishment. And for what purpose?—to prove the notable fact, that those who affect to understand the subject *most*, are *least* understood by professional people. What with the constant misapplication of nautical terms, intermixed with a strong muster of high-sounding phrases, "prest" in support of the several disquisitions published upon the subject, it may be safely asserted, that there is not a single paragraph in print upon the theme of stowage rendered intelligible to the naval reader. One writer, after losing himself in a labyrinth of complicated cases, involving a series of nautical conditions too deep for his fresh-water knowledge, winds up *his* scientific paper in the following *satisfactory* strain:—

"These principles" [mark, *principles!*] "*govern* the stowage of ships; the manner and degree by which they must be carried into *practice* must be *ascertained* by *experiment*." It is productions of this stamp that bring science into disrepute.

ment,"—bearing in mind that due consideration be given to the several contending conditions involved.*

If, then, the stower confine the distribution of the ballast to that part of the vessel's bottom, not only nearest to her centre of gravity, but also where her greatest capacity lies, he will find that the application of this principle will not prove very erroneous in practice.

STOWING OF TANKS.—The master should be particularly attentive in preserving a strict line of *level* in the position of the tanks. To effect this, and to produce the desired uniformity of surface, the stower must commence the stowage from the midship stanchions in the hold, and work inwards regularly towards the direction of the wings. The

* A vessel may steer and stay well, possess considerable stability, stand well up under her canvass, and yet, in other particulars, of equal importance, be extremely defective as a ship of war. She may lurch suddenly, and roll heavily; strain and strand her standing-rigging, if not roll away her masts; and pitch and scend with such violence as to spring or snap her spars whenever opposed to a head-sea. The centre of gravity longitudinally must be also taken into account; few ships will admit of weight being placed in either extremity. For suppose a ship have a sharp entrance, or, in professional phrase, be lean or fine forward, it is manifest that weight placed at any great distance before her centre of gravity must tend materially to augment the force of the pitching motion.

slightest irregularity of surface in the tops of the tanks may be the immediate means of throwing out the general stowage, and of ultimately causing a considerable deficit in the quantity of water which the hold is calculated to contain.

## DRAWING CABLES.

THE cables should be coiled in the lighter which conveys them to the vessel in the same manner in which they are intended to be *bitted* and coiled in the ship. Experienced officers recommend the method of *crossing* the cables in the hatchway. This system tends to facilitate the operation of "bending and breaking in" the fakes, and afford to the tierers in the tier more room for working and coiling the cables.

CLINCHING CABLES.—Whatever be the number of *hempen* cables which are to be bent to anchors, the master is particularly cautioned to clap on a *clinch-rounding* towards the inner extremity of each cable, keeping three sheaves in the tier. Upon receiving the cables on board, and clinching their respective ends, the master may proceed as given underneath.*

* Pay down three sheaves into the tier, and then clap on a racking lashing to the fore-beam, previously worming and par-

CHAIN CABLES should never be clinched* in a manner which will not admit of their ends being immediately *disengaged*, in the event of it becoming necessary to "slip," or extricate the ship from her anchors. It may be said that the cable may be unshackled on deck; but it may so happen that the *last* shackle is *without* the hawse, a circumstance which will preclude the possibility of having recourse to this expedient.

## LOG-LINES.

PREVIOUSLY to marking the log-lines, it is recommended to *wet* them well after they have been

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celling in the wake of the lashing; measure then the cable bitted, and clap on a rounding in the wake, where the cable would bring up in the hawse and chafe in the cut-water. This method leaves room to *freshen* hawse in the event of having to veer to the clinch.

It is a melancholy fact, that more than one frigate during the late war, together with the greater portion of their respective crews, were lost, in consequence of their cables *parting* in the vicinity of the hawse when *veered* to the clinch. Few ships adopt the precaution of clapping upon their cables a *clinch service*. When too late, the necessity of the practice is discovered.

* A *lashing* will be found to be the most safe and serviceable mode of clinching chain-cables. Should it become necessary to "slip," a sharp axe will achieve all that is required. Some ships *slip* short chains middled round the main-mast, and crossed with two legs; into the end of each "slip-shackles" are inserted. But slip-shackles often *hold* when they ought to *slip*, and slip when they ought to *hold*.

stretched, and to divide the knots into portions of forty-seven feet three inches to the twenty-eight second glass.

## PREPARATIONS FOR LEAVING HARBOUR.

HINTS.—Inspect the tiller-ropes—Shift "hard over" the helm once or twice each way, to ensure that the tiller be not obstructed in its sweep in the gun-room— Place lead-lines in both channels —Point the ends of hawsers up the hatchways, ready for paying out in any direction—Range both bower cables—See placed in readiness for service stoppers (bit and ring)—Examine cat-head stoppers, and shank-painters* of both bower anchors.

## SHIP TOWED BY STEAMER.

WHEN the ship is towed by a "steamer," and *two* tow-ropes are employed and worked at the capstans of the vessel *towed*, care must be taken that a steady carpenter be stationed to attend the "*palls*" of the capstans. When a sudden strain comes upon the acting hawser, and the palls of the

* Should the shanker-painters be fitted "slip-shackle" fashion, care should be taken to place people by them who are acquainted with the method of disengaging the anchors.

capstan are not ready prepared to catch, and support the weaker power, the capstan revolves round at a rapid rate, endangering the limbs and lives* of the men encircled at the bars.

*Note*—For "Fitting Lower Rigging and Sails," "Transporting Anchors," and "Stowing Booms," vide *Boatswain*—"*First Commissioning.*"

* Within these few years, some serious accidents have occurred at the capstans of vessels which have been towed by steamers. The safest method of propelling a large ship is to *lash* the steamer alongside of the vessel to *leeward.*

*A Table shewing the Weight of Cables and Anchors used in His Majesty's Ships and Vessels of War.**

| Rate in Guns... | 120 | 80 | 74 | Razee 50 | 52 | 46 | Razee Corvette. 26 | 28 | Corvette. 18 | Brig 18 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cables — Hempen, No. | Brs. Stm. 5 1 | Brs. Stm. 5 1 | Brs. Stm. 5 1 | Brs. Stm. 5 1 | Brs. Stm. 5 1 | Brs. Stm. 4 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 2 1 |
| Cables — Weight ..... | T. C. Q. 32 10 0 | T. C. Q. 29 15 0 | T. C. Q. 25 4 0 | T. C. Q. 25 4 0 | T. C. Q. 25 4 0 | T. C. Q. 13 1 0 | T. C. Q 9 13 0 | T. C. Q. 6 19 0 | T. C. Q. 6 19 0 | T. C. Q. 4 1 0 |
| Cables — Iron, ... No. | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 | Brs. Stm. 3 1 |
| Cables — Weight..... | T. C. Q. 37 3 0 | T. C. Q. 36 11 0 | T. C. Q. 30 17 0 | T. C. Q. 30 17 0 | T. C. Q. 30 17 0 | T. C. Q. 26 2 0 | T. C. Q 26 2 0 | T. C. Q. 15 18 0 | T. C. Q. 15 18 0 | T. C. Q. 10 8 0 |
| Total weight of the Cables ... | 69 13 0 | 66 6 0 | 56 1 0 | 56 1 0 | 56 1 0 | 39 3 0 | 35 15 0 | 22 17 0 | 22 17 0 | 14 9 0 |
| Anchors... | 20 16 2 | 17 8 0 | 15 5 0 | 15 5 0 | 12 10 2 | 10 1 0 | 8 11 0 | 4 5 2 | 4 5 2 | 3 10 2 |
| Total weight of Cables & Anchors | 90 9 2 | 83 14 0 | 71 6 0 | 71 6 0 | 68 11 2 | 49 4 0 | 44 6 0 | 27 2 2 | 27 2 2 | 17 19 2 |

* Abridged from "*Edye's Calculations.*"

# IN PORT.

## AT SINGLE ANCHOR—MOORED, &c.

VIDE *Officer-of-the-watch.*

## UNMOORING.

UNDER this head, in the chapter entitled "*Boatswain, in port,*" will be found a few observations, to which the attention of this officer is particularly directed.

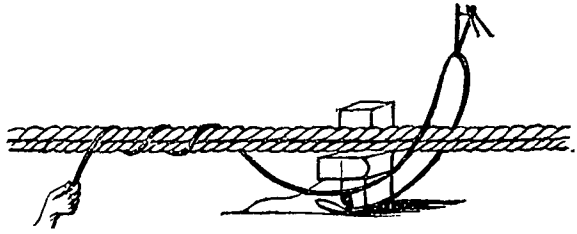
## WEIGHING ANCHOR.

CASTING.—When the wind, tide, and locality of the anchorage admit of the vessel's casting clear of the shore, shoals, and shipping, it is recommended to defer the operation of *loosing sails** until the

* In frigates, and flush-deck vessels, the repetition of shipping and swifting the capstan bars is frequently attended with much of *unnecessary* trouble.

anchor be hove right up, catted, fished, and all the running-ropes are clearly coiled and fairly led for "clapping canvas" on the ship.

WEIGHING IN A HEAD SEA.—In weighing with a head sea, the master should take the precaution to have previously prepared a good deck-tackle, or appropriate purchase to affix to the messenger, and assist the action of the capstan. He should also have in readiness a plentiful supply of dry nippers, and have purposely passed and stopped with a rope-yarn over head, the bitt stopper, as represented in the following sketch.



## CASTING ON CUTTING THE CABLE.

WHEN at single anchor in a roadstead, and it be apprehended that, from the direction of the wind, and the local position of the ship with the shore, it may be necessary to have recourse to cutting the

cable, and that casting the *wrong way* would endanger the safety of the vessel, *timely* precaution should be taken to insure the ship casting in the *desired* direction.

To effect this purpose, the stream cable should be bent to that of the riding bower, brought through the after port, and taken round the capstan, in readiness to act as a spring, so as to *cant* the ship previously to cutting. Axes should be placed abaft in the vicinity of the stream cable for the purpose of cutting it after the bower has been severed and the ship's head cast the desired way.*

## COMPLETION OF COALS, WOOD, AND WATER.

It is particularly the province of this officer to attend to the completion of the ship's wood and water. Deficiency in these particulars authorize a timely representation to be made to the captain or commanding officer.—Vide *Purser*.

* A slip, or buoy-rope, should be brought up over the "*head*," so that when the cable be cut, a buoy may be left in the roadstead to denote the position of the anchor.

In the winter season, and particularly with a "falling glass," it is always advisable to furl with reefed courses and close-reefed top-sails.

## SHIP'S DRAUGHT OF WATER.

SUBSEQUENTLY to every supply of stores, provisions, and water, the master should require from the carpenter a return, in writing, of the ship's draught of water.—Vide *Carpenter.*

## CHARTS, NAUTICAL BOOKS, &c.

THERE are several nautical books *not* supplied by the Admiralty, and of which this officer should be possessed previously to leaving port. Vessels-of-war have been known to put to sea *minus* the "Nautical Almanac;" and ships have proceeded to the South American and East Indian stations destitute of publications touching the localities of either clime. The works of the celebrated Hosburgh should be in the possession of every officer destined for either station.*

* Hitherto, charts were drawn at the admiral's office. This arrangement is about to be altered.

HINT—Examine the charts and books contained in the box *before* signing a receipt.

# AT SEA.

## ALTERATION OF THE SHIP'S COURSE.

THE ship's course should never be *altered* without receiving the sanction of the captain; nor should the master direct the most trivial change in the position of the vessel's head, without previously intimating his intention to the officer-of-the-watch.

## MERIDIONAL ALTITUDE.

IT is the duty of this officer (though he seldom exacts his authority) to see that all* the mates, midshipmen, and young gentlemen of the ship be on deck, with their respective quadrants, by *seven*-bells of the forenoon.

* It is a mistake to imagine that in obtaining the meridional altitude the deck can be thronged with too many observers.

## LAYING OFF BEARINGS ON CHARTS.

"FEW masters are at all acquainted with the value of the *protractor* in laying off angles, or bearing of the land on the chart. In narrow seas, such as the Archipelago, where some well-fixed points are almost constantly in view, it is evident that the 'ship's place' can be determined with a greater degree of accuracy by the intersections of this instrument, than by those obtained through the common-place medium of parallel rulers. The latitude may generally be obtained at once for working the longitude, instead of following the usual practice of awaiting noon—a practice which involves all the errors of the log, and which, when the land is in sight, has to depend upon the bearing and *estimated* distance of some single point." *

## AZIMUTHS.

"IT is a mistaken idea, that a ship *must*, of necessity, be very steady to observe an azimuth. In a gale it is difficult, if not impossible; but during strong breezes, and even considerable motion, an azimuth may be obtained by means of Gilbert's

* Unpublished remarks of Sir John Franklin.

prismatic compass. Although, at first sight, the observer fancies the motion of the card sets him at defiance, yet he will very soon perceive that the oscillation has a mean motion, and he can determine to ten minutes what the middle point is. Immediately after taking his sights for time, let him go to the azimuth compass, and, moving the dark reflector, until he causes the sun's reflected image to be seen just on the graduation, watch when the motion becomes sluggish. He should call "stop," and continue to read off, as rapidly as he can, the mean oscillations; calling stop at the tenth. The following shews the form of taking and noting such observations :—

( 9 VII/32 at Sea.

+ P. = with Barlow's Plate; — P. without do.

| h. m. s. | ° ′ | h. m. s. | ° ′ |
|---|---|---|---|
| 8 11 56 | 86 0 | 8 12 42 | 85 00 |
| | 85 50 | | 30 |
| | 50 | | 30 |
| | 30 | | 40 |
| + P. Head N. | 30 | —P. | 30 |
| | 40 | | 20 |
| | 40 | | 20 |
| | 40 | | 30 |
| | 50 | | 40 |
| 12 22 | 40 | 8 13 8 | 86 00 |
| Mean 8 12 9 | 85 43 | 8 12 55 | 85 30 |

| | Tacked. | | Head S.E. | |
|---|---|---|---|---|
| h. m. s. | ° ′ | | h. m. s. | ° ′ |
| 8 35 50 | 82 20 | | 8 36 38 | 82 00 |
| | 40 | | | 00 |
| | 30 | | | 40 |
| | 20 | | | 83 00 |
| + P. Head S.E. | 20 | | —P | 0 |
| | 30 | | | 0 |
| | 00 | | | 82 40 |
| | 00 | | | 83 0 |
| | 81 40 | | | 10 |
| 36 14 | 82 00 | | 37 12 | 00 |
| Mean 8 36 2 | 82 14 | | 8 36 55 | 82 45 |

With the apparent time, deduced from the altitudes taken for chronometer, the sun's true bearing is obtained, and thence the variation. If any doubt is thrown on the result, the true bearing may be worked from the altitude, which may be obtained by computation, or by proportion: in the latter case, one altitude should be taken by time after the set is completed.—*Belcher's Nautical Surveying.*

## RUNNING FOR THE LAND.

WHEN running for the land, or *pushing* for a port,* the master will do well to interrogate him-

* In all cases the master should consult the barometer, the indications of the sky, and particularly the rising and the setting of the moon. If "charged with despatches," the captain will be the best judge to balance the risk to be run with the importance of the object to be attained. But the master should not manifest any indecision of conduct, or vacillate in that course which he may himself have previously recommended to his captain. Officers of this grade sometimes urge their commanders to carry canvas for a certain period, and then stop suddenly short, without assigning a satisfactory reason for requiring sail to be shortened, the course altered, or possibly the "ship's head to be put the other way." Such conduct never inspires that degree of confidence which should mutually be felt by the master and captain.

self thus :—"Is there any object to be attained by running a risk?" If the reply be not in the affirmative, the risk then amounts to *rashness*.

## CLEARING FOR ACTION.

To remedy the mischief produced by "casualties" to which the spars, sails, rudder, and rigging of a ship are liable in battle, should be the primary care of the master; every precaution should therefore be taken that the *spare* tiller, tiller-ropes, and wheel, be in perfect readiness for immediate use, and that the "relieving-tackles," "rudder-pendants," and "rudder-chocks" be prepared for service.

The superintendence of these duties, however essential, need in no way deprive the master of the earliest opportunity to consult with the captain, touching contemplated movements, manner of "manœuvring," closing with the enemy, or being brought to battle. In all suggestions offered for the consideration of his superior, it behoves this officer to shape them in clear, succinct, intelligible words. When receiving the captain's opinions, he should never *affect* to *understand* them, unless he clearly sees their purport. If the method of meeting the enemy's assault, or bringing him to battle, be not

made manifest, or clearly conveyed to the master's mind, that officer had better confess the fact, than *deceive* alike himself and his commander. Double deceptions are doubly dangerous.

# PRACTICAL HINTS.

## KEEPING A CLEAR ANCHOR.

THAT part of seamanship which relates to the method of tending a ship to the tide, or, in other words, of keeping the cable clear of the anchor, may not be inaptly termed the *blind branch* of the mariner's art—the buoy floating on the surface being the only visible guide that the seaman possesses to point to the position of the anchor hidden under water.

From being little understood, and, by young officers, seldom put into practice, the art of keeping a clear anchor is by many considered a difficult task. But were lieutenants to give more attention to the matter, and to place less dependence on

the master, or the pilot, they would soon attain every necessary knowledge to meet the most difficult tidal case.*

## ANCHOR TURNING IN THE GROUND.

In order to ensure the certainty of the anchor turning in the ground with the tending or swinging of the ship, it is recommended, whenever it is possible, to resort to the practice "to shoot the ship on the *same side* of her anchor, at each change of tide; for, should the anchor not turn in the ground, the cable will get foul either about the stock or the upper fluke, and trip† it out of the ground."‡

## TO TEND FOR A WEATHER-TIDE.‖

Let it be supposed that a ship is riding at single anchor upon a lee-tide, with the wind in the exact direction of the tide, and that it be required, upon the tide's setting to windward, to tend the ship clear of her anchor. To effect this, as soon as the ship begins to

* Though this chapter is here inserted, to preserve the order of the work, it is not intended by the author to confine its perusal alone to the master. The master is supposed to be master of the subject.

† If the anchor be tripped, and the ground be at all "stiff," the probability is, (unless the upper fluke cast downwards, and occupy the position of that already displaced,) that the quantity of clay adhering to the other arm would prevent it again taking hold, or hooking in the soil; and possibly the first intimation the officer-of-the-watch has, that *the ship is walking away with her anchor*, is the awkward discovery of being close in the hawse of another vessel.

‡ Gower.

‖ Abridged and corrected from Gower and Hutchinson.

*feel* the turn of the weather-tide, and that the vessel brings the wind broad upon the weather-bow, the head-sails should be hoisted, and then *lee*-sheets hauled aft, in order to shoot the ship from her anchor on a *taut* cable. The helm must then be put a-lee, and kept in that position till the tide settles the ship over to windward of her cable, and the buoy appearing on the same side with her helm.

If, from little wind, the buoy bears nearly a beam, the head sails may be hauled down; but if the breeze be strong, and it causes the ship to shoot in a direction nearly end on with that of her cable, bringing the buoy upon her quarter, it will be then necessary to keep the fore-top-mast stay-sail* set, in order to check the vessel should she be disposed to break her sheer against the action of her helm, or be inclined to drop to windward, and "go over" her anchor in a broadside or lateral direction.

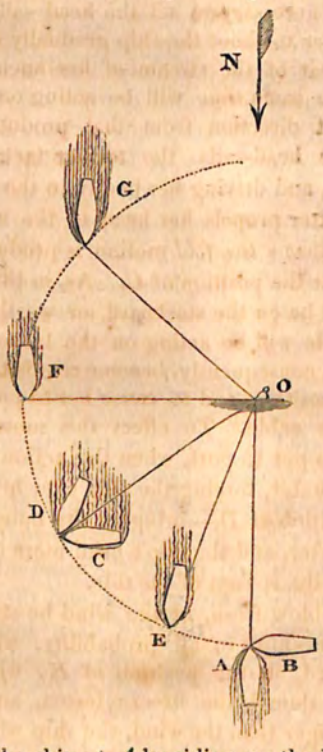
## TO TEND WITH THE WIND ACROSS THE TIDE.

When the wind is across the tide, the simplest and most approved method of tending a ship on both sides, will be to keep the vessel to leeward of her anchor. At each slack water, the ship would become wind-rode; and as she tends and brings the wind on either side, the helm must be put to weather, and the jib, or fore-top-mast stay-sail set, with the sheet hauled over to windward, to force the ship at taut cable from her anchor. When the tide is set, and the ship upon her

* When weather-tide slacks, and the ship falls wind-rode, the fore-top-mast stay-sail should be hauled down, and the helm righted.

proper sheer to leeward of her anchor, the jib or stay-sail may be hauled down.

The annexed diagram will serve to demonstrate the preceding rules, and to shew the ship's different tidal positions when riding at single anchor.




Suppose the ship at *A* be riding on the lee-tide with the wind at north,—when the lee-tide is done, and

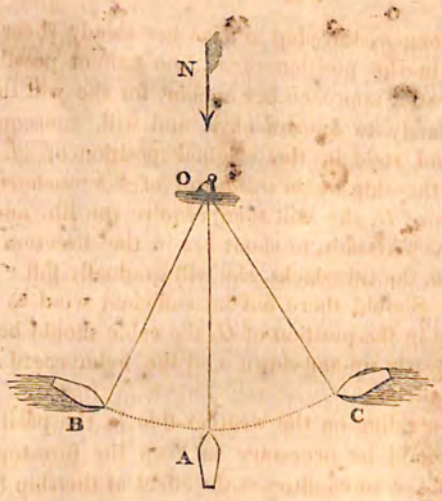
the weather-one begins to set in the direction of *A O*, the coming tide will cant the ship with her head either to the eastward or to the westward,—say the latter, as at *B*. If the ship be left to herself, the probability would be, she would drift *over* her anchor in the direction of her buoy at *O*. To prevent this, it will become necessary to set the head sails with full sheets, in order to shoot the ship gradually over to the westward, clear of the stream of her anchor; but as the tide at the same time will be acting on the vessel in a different direction from that produced by the effect of the head-sails, the former tacking her on the lee beam, and driving her bodily to the northward, whilst the latter propels her head to the westward, it will be seen that a *two-fold* motion is produced till the ship arrives at the position of *C*. As, in this situation, the wind will be on the starboard, or weather quarter, whilst the tide will be acting on the larboard, or lee beam, it will, consequently, become requisite to change the vessel's position, and to cause her to pass with her *heel* over her cable. To effect this movement, the helm must be put to port, when the action of the tide on the *lee* counter, forcing the ship over her cable, will alter her position at *D*,—bringing the buoy, *O*, on the larboard quarter, and the ship's head more immediately presented to the stream of the tide.

Should it blow fresh, or the wind be stronger than the tide, the ship, in all probability, will shoot to the southward, in the position of *E*; while, on the other hand, should the breeze lessen, and the tide become stronger than the wind, the ship will gradually drop with a taut cable in the direction of *F*, or that of *G*.

So long as the ship retains her steady sheer when riding in the position of *E*, she cannot possibly, at slack water, approach her anchor, for she will then be immediately to *leeward* of it, and will, consequently, fall wind rode in the original position of *A*. But should the ship be to *windward* of her anchor in the position of *G*, she will then require the jib, and possibly the stay-sails, to shoot her in the direction of *E*, when, as the tide slacks, she will gradually fall "wind-rode." Should there not be sufficient wind to shoot the ship in the position of *G*, the cable should be hove in to nearly up-and-down and the helm eased as the tide slackens.

When riding on the weather-tide in the position of *E*, it would be necessary to keep the fore-top-mast stay-sail set, to counteract the effect of the ship breaking her sheer, or coming athwart the tide—the object being to prevent the vessel drifting to windward in the stream of her anchor.

The diagram on the opposite page will serve to exemplify the rules relating to the case of tending when the wind is across the tide.




Suppose the wind be at north and in a direction exactly across the stream of the tide,—at slack water, the ship will naturally fall to leeward of her anchor in the position of *A*. But when the tide makes from either the points of E. or W., the ship will swing to the position of *B* or that of *C*. A turn of weather helm, together with the fore-top-mast stay-sail set (sheet hauled over to windward), are the only measures which may be taken to insure a *taut* cable to leeward of the anchor during the entire tide.

## TO LET GO ALL THE ANCHORS UPON A LEE SHORE.

When it becomes impossible to "crawl off" a lee-shore, and carrying canvas is of no avail,

Hutchinson recommends the adoption of the following practice,* as best calculated to rescue the ship from her perilous position. After preparing all the cables and anchors, so as to enable the latter to be let go alternately, and dropt at a little distance from each other, and as much as possible in a line parallel to the shore, proceed thus :—

"Furl the square sails as quickly as possible, and brace the yards full; set the fore-top-mast, fore, and main stay-sails, and put the *helm up*, so as to keep way on the ship, as the cable of each anchor runs out in succession. The anchors pertaining to the cables in the *weathermost* hawseholes should be dropt first.†"

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* The original text has been considerably abridged.

† The recommender of the above method of anchoring upon a *lee*-shore is silent upon the subject of cutting away the masts. But should the vessel drive after all the anchors are down, and that every precaution has been taken to lighten the *top weight* aloft, the only alternative left is to cut away the spars of the ship. It is *not*, however, advisable to cut the *foremast* away, particularly should there be discovered on the neighbouring shore a favourable spot to *beach* the vessel.

# BAROMETRICAL INDICATIONS.

THE following observations are abridged from an article which appeared in an early number of the "United Service Journal," entitled a "Popular View of Meteorology, and its Practical uses to the Seaman." The paper is generally supposed to be the production of an officer* of scientific attainments, and one eminently qualified to treat upon the subject.

"By this faithful guide (the barometer) I even," says the writer, "directed the making and shortening sail, with such precision, that I never once had occasion to turn the hands up in the night; and, during a practice of many years, had cause to rejoice in the implicit trust I reposed in its powers. It is not the absolute *place* of the mercury, however, which must

* Captain Wm. H. Smyth, R.N., F.R.S., &c.

be consulted; but also the convexity, level, or concavity of surface, as indicating a disposition to rise, remain stationary, or fall; and the time when such disposition *commenced.* The relative situation of the sun must also be considered, as well as the height of the thermometer, though the bracing or relaxing power of the atmosphere, by the forces of expansion and pressure on the leathern reservoir, far surpasses any effect of heat on the quicksilver. Owing to these circumstances, a few general rules for interpreting the movements of the barometer may prove acceptable to beginners, especially as the words engraven on the side-plates rather *mislead* than instruct; since the true scale will be found also, in some measure, to depend on the season of the year, and the latitudes, as well as height, of the place of observation.

"From various experiments, the mean pressure of the atmosphere at the level of the sea is estimated at about thirty inches; and, for common purposes, a tenth of an inch depression may be allowed for every eighty feet of additional elevation.

"The deviations of the mercury *without* the tropics are greater than those within them; and are there greater and more frequent in the winter than in the summer. But though slight changes are scarcely shewn near the *equator*, and heavy squalls may occur without being anticipated, yet the approach of a hurricane is foretold by the usual fall of an inch, or more. In calm weather, with inclination to rain, the mercury is commonly low and sluggish. It sinks lowest, everywhere, to extremely violent winds, which may be accompanied by rain; yet it rises, to north-east and east winds, during which there may also be showers, with-

out any intimation from the quicksilver. When it sinks with the wind in those quarters an alteration will take place.

"If the barometer has risen during the night, and is still rising, with the hygrometer decreasing, the clouds high, and wind moderate, particularly if it be from the north or east points, a dry day may be confidently expected. The same rule applies from evening until morning. Indications for foul days and nights will obviously be the reverse.

"Although the rising of the mercury, *cæteris paribus*, is held to presage fair weather, and its falling, especially with an increase in the hygrometer, the reverse, yet it should be noticed, that a sudden rise may sometimes indicate a southerly wind, which often brings rain; but in winter it portends frost; for the quicksilver, from palpable causes, is wont to be higher in *cold* weather than in warm. It must also be remembered, that the daily maximum of the barometer is usually about nine o'clock in the morning,—the mean at noon,—and the minimum at three P.M. When the elevation or depression is rapid, the consequent change will be of short continuance; but slow and progressive variations indicate permanency.

"In winter, spring, and autumn, the sudden falling of the mercury denotes hard gales; but, in summer, heavy showers and thunder. From the greater variations of the quicksilver between October and April, it follows, that the fall of one-tenth of an inch in summer is as sure an indication of rain, as two or three tenths in the winter. Thunder may happen without sensibly affecting the barometer; but in this case the storm seldom reaches far; and when it is attended by

a fall in the tube, its effects will be found to have been more extensive. If the quicksilver falls very low, although the weather continues mild and moderate, it is the effect of a contemporaneous gale in some distant place. These apparent anomalies account for the charges occasionally made against barometers of giving false alarms.

"In the *English Channel*, off the *Azores*, and along the *Atlantic* shores of *France*, *Spain*, and *Portugal*, the writer has had repeated proofs of the unerring efficacy of the marine barometer.

"Between the capes of *St. Vincent* and *Spartel*, the south-west winds are the most disagreeable; but the depression of the quicksilver is sure to denote a violent gale. A gale in this quarter is always precursed by a long hollow swell from the westward.

"Within the *Mediterranean*, the predominant breezes are from the north and west quarters, except in the spring, when south-east and south winds prevail, but their duration and strength are extremely uncertain about the period of the equinoxes. As the barometer does not generally vary more than a few lines, it requires great attention to mark its indications; they will, nevertheless, prove satisfactory; and it may be laid down as a general rule, that whenever the quicksilver sinks so low as 29° 40′, a *severe gale* may be expected.

"In the *Eastern* division of the Mediterranean Sea, the north winds are mostly dry and salubrious, though cold and often violent, while the south one is mild and moist, accompanied by rain; that from the east is laden with mist and vapour, and the western, though often stormy, produces clear skies and exhilarating effects.

The nature of these winds differ essentially according to locality, but they never blow very violently without a corresponding effect upon the mercury.

"The most annoying wind is the *sirocco*.* At its commencement the air is dense and hazy, with long, white clouds setting a little below the summit of the mountains, and, at sea, floating just above the horizon, in a direction parallel to it. The thermometer does not at first experience a very sensible change, though it rises with a continuance of this wind to 90°, and sometimes to 95°; the barometer gradually sinks to 29° 60′.

"In the *Adriatic*, the weather is notoriously mutable: calms, thunder, and water-spouts being frequent all the summer; and heavy northerly blasts, called boras, with fogs and hard squalls, during the winter. The bora† is greatly dreaded in the upper part of the Gulph of Venice, particularly in the channels of the Quar-

* "The sirocco generally continues three or four days, during which period, such is its influence, that wine cannot be fined, or meat effectually salted; and oil paint laid on whilst it continues will seldom harden." During a sirocco, the Maltese *refuse* physic.

† "Ships caught by the bora generally let fly every thing to receive the first blast, and immediately bear up to the southward to seek safety in any port they can fetch, or remain under bare poles until it is exhausted. Many prizes during the war were lost by these violent gusts, and some of our cruizers have been nearly laid on their beam ends when caught unawares. In December 1811, the French frigate *Flora*, of 44 guns and 340 men, was surprised by a bora, on her passage from Trieste to Venice, which threw her on the coast near Chiozza, where the captain and two-thirds of the crew perished; and, in 1820, the *Monta Cuculi*, an Austrian corvette, was met by one, while under all sail, and instantly foundered with all hands."

nero, where it rushes down the whole line of the Julian Alps with irresistible fury. The coming of this wind may be known some hours beforehand, by dense cloud-banks on the horizon, with light fleecy clouds above it, and the sky rather lurid. Its general direction is from north to north-east, and its continuance about fifteen or twenty hours, with heavy squalls, and terrible thunder, lightning, and rain at intervals. These winds, however, give sufficient notice of their approach to an attentive observer, although violent squalls of short duration may be encountered without much barometrical indication."

# OFFICER OF THE WATCH.

## PRELIMINARY REMARKS.

PREVIOUSLY to enumerating the several duties assigned to this officer, it may not be deemed superfluous to prefix a few words by way of impressing on the mind of the young lieutenant the serious responsibility attached to this important post, and to demonstrate the disastrous consequences, both national and private, which might ensue from even a momentary lapse in his vigilance. He must ever bear in mind, that upon his watchfulness, zeal, and professional skill, will depend much that is of vast political and commercial importance; such as the movements of an enemy's fleet,* or the

* What, for example, might have been the result, had the lieutenant in charge of the *Glatton's* deck lost sight of the

safety of a convoy; and he must render himself deeply conscious that in his sole keeping are the lives of hundreds of his shipmates, who have no other security, during the helplessness of sleep, than can be derived from his guardianship, and who lie down in their hammocks fully confiding in his care. Considerations such as these are sufficient, it is hoped, to convert, for a time, the most careless (should such unhappily exist in the ship) into the most thoughtful; and to render the duty of the officer-of-the-watch a sacred trust, to be undertaken with grave earnestness, and discharged with unremitting anxiety.

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Texel fleet? or if, from negligence, the officer-of-the-watch of the *Euryalus* had permitted Villeneuve to evade the battle of Trafalgar?

# GENERAL DIRECTIONS.

## REPORTS.

For night and morning reports, vide *Midshipman, and Warrant Officers.*

## OBSERVANCE OF SILENCE.

The officer-of-the-watch should never permit noise, confusion, or disorderly conduct on deck. In enforcing these prohibitions, he is not, however, recommended to make trivial complaints to the captain.*

* Minor offences may be marked or punished in a manner well calculated to subdue riotous spirits, and benefit the service. With such subjects, double duties below, and *extra* "*exercise*" aloft, produce a wonderful *reforming* effect.

## ONE WORD OF COMMAND.

It is much to be regretted, that, in executing evolutions afloat, one identical word of command is not observed by all the officers of the ship. In effecting the *same* evolution, in the *same* ship, two officers will give *two* very different words of command.* In all ships, any particular evolution should be carried into effect through the medium of one settled form of mandatory words.

## MEALS.—COMFORTS OF THE CREW.

The officer-of-the-watch should studiously avoid disturbing the ship's company at meals; indeed, he should rather be disposed to extend, than *curtail*, the time allowed for the purpose; and he cannot too constantly consult the personal comforts† of the crew.

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* For example—In shortening sail upon a wind, one lieutenant will indulge in a long and loud train of mandatory sounds, such as, "Let go the bow-lines in top-gallant sails! Up courses! Down jib and stay sails!" whilst another officer, less disposed to be *noisy*, and more prone to brevity of speech, will content himself, and more effectually accomplish his purpose, by the adoption of the terse phrase, "Shorten sail!"

† Seamen are not deficient in discernment after their own fashion, and are by no means those dissatisfied and ungrateful beings which people unstudied in their character gratuitously assert. The

## MOVEMENTS OF THE SENIOR OFFICER.

UNLESS previous permission be granted "to disregard the admiral's motions," the movements of the flag or senior officer's ship should be closely and promptly followed; and the captain or commanding officer should be immediately made acquainted with all signals* or movements of the flag or senior officer's ship.

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prompt, cheerful, and willing manner in which a "Watch" will work for one officer, compared with the sullen, dilatory, *drag-drag* performance of similar duties for another, manifest sufficiently the feeling which sometimes sways and actuates the foremast-men in the execution of service, even of the most pressing and paramount importance.

* The lieutenant-of-the-watch should never authorize nor direct the most trivial signal to be made without the special sanction of the captain or officer in immediate command.

# IN PORT.

## KEEPING WATCH.

COMMISSIONED officers are cautioned not to indulge in the *deceptive* maxim*—"*Lieutenants are not expected to keep watch in port.*"†

Unless especially released from this charge by the captain or commanding officer, the lieutenant-of-the-watch becomes responsible for every occurrence that transpires upon deck, until regularly relieved by competent authority.

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* In putting this maxim to the test, many a promising young officer has paid the penalty of his commission. A reference to a recent trial held in B—— may probably remove the doubts of those lieutenants who are said to be sceptical upon the subject.

† The *Danemark* (seventy-four) *parted* from her moorings in Portsmouth harbour, and drifted on the strand of "Common Hard." Luckily for the lieutenant-of-the-watch, he was *not* among the "*missing*" when inquiry was made.

## CLEARING LIGHTERS.

UNLESS the execution of service more pressing interferes, (and such should always be noted in the log,) lighters pertaining to public departments should be cleared with the utmost despatch, and on no account be unnecessarily detained along-side of the ship.*

## STOPPING-OUT TOP-GALLANT-YARD ROPES.

THE practice of permitting the top-men to stop the top-gallant-yard ropes out at their own convenience, and consequently at unstated periods, is at variance with that order and regularity which should ever characterize the duties and discipline of a vessel-of-war. In well-regulated ships, the officer-of-the-watch, following the movements of the senior officer, directs the boatswain, or his mate, to pipe "*out yard ropes.*" If tripping-lines are tolerated, the yard-rope and tripping-line men should "lie out" *together*. By pursuing this system, the yards will be kept square, and will not (as is of

* Before shoving off from the ship, vessels of this description should be searched.

constant occurrence to be seen, for an hour and a half before sun-set, *topping* in different directions. The same rule should be observed when placing on the lower-yards whips for the hammock gauntlets.

## ATTENTION TO THE HAWSE.

It is the duty of this officer to pay particular attention to the state of the hawse, and to take every precaution to keep it clear.

He who leaves to chance the tending or swinging of the ship,—neglects to anticipate the effects of time and tide,—delays* or vacillates in the necessary steps to be taken to insure the vessel going the "right way," assuredly goes the *wrong* way to work.†

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* The officer-of-the-watch should bear in mind, that setting the mizen-top-sail or driver, or despatching a warp to the nearest vessel or buoy that bears, are *light* and momentary movements compared to the heavy operation of CLEARING HAWSE.

† In canting, or tending to the tide, the head-sails will be found of little avail. The practice is founded in error: the lever, in fact, is applied to the wrong end. When the wind takes a vessel in a position to preclude the assistance of after-sail, a warp from abaft should be taken out in time. It is true, that, if the wind be steady, the same breeze which (according to the old quarter-master's "saw" and constant cry) causes "a *cross*" on *one* tide, will take it *out* on the next. But in speculations of this nature the officer-of-the-watch should never indulge, and particularly as the wind generally *changes* with the turn of the tide.

## SINGLE ANCHOR.

If there be wind sufficient to keep the cable taut, the ship should never be allowed to approach her anchor. Should calm or little wind render ineffective the use of sail, the cable should be "*shortened-in*" as soon as the tide begins to slacken.*

If, during any period of his watch, there be reason to apprehend that the ship has approached, or *gone over*, her anchor, the officer in charge of the deck should report† the circumstance to the captain, in order that the first convenient opportunity may be taken to "*sight it.*"

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* From the weight of the chain-cable, compared with that of the hempen, the former is less liable than the latter to foul the anchor. But no such speculation should induce an officer to depart from that practice which can alone ensure a "clear anchor."

† From apprehension that negligence or a want of proper precaution may be imputed to the officer-of-the-watch, lieutenants sometimes *omit* to make this official "*report*," an omission highly reprehensible. Incalculable mischief may result from permitting a vessel to remain in a position of *uncertain* security.

# AT SEA.

## CAPTIOUSNESS OF JUNIOR OFFICERS.

It may not be considered inconsistent with the object of the present work to advert, in this place, to a subject which has occasioned much annoyance, and which has been the source of great irritation among many zealous and well-meaning men. It is this:—A young lieutenant-of-the-watch too often conceives he is upholding the dignity of the profession in general, and his own in particular, by manifesting a petulant jealousy of the interference, during his charge of the deck, of the first-lieutenant. Such captiousness is much to be lamented, not only because it manifests a hasty temper, (the last thing to be desired afloat,) or because it shews ingratitude

for well-meant suggestions,* but because it evinces an imperfect acquaintance with the established discipline of the service, which gives, in all situations, *superior* command to a superior officer.

## WORKING THE WATCH IN WET WEATHER.

UNLESS the occasion be pressing, the lieutenant in charge of the deck should as seldom as possible "work the people in the wet." Sail may be readily reduced before the rain arrives; the inconsiderate system of awaiting to ascertain, by proof positive,

* For instance, how often when, from anxiety for the public service, has the first-lieutenant, coming unexpectedly on deck, offered a timely or friendly hint, or perhaps even given a *necessary* order, been received by the young and too-consequential officer in such words as these:—"Very well, sir; if you are desirous to take charge of the deck, you had better take the trumpet." This, though it may find favour in the eyes of the foremast men, who, right or wrong, relish what they term a "bit of spirit," will not elevate an officer in the estimation of his captain, nor advance his interest in the service. Besides, such testiness is sure to provoke from the first-lieutenant a rebuke, from which, under the circumstances, there is no appeal. "I intended," this officer may say to his irritable friend, "to give you a civil hint; this you think proper to resent, and therefore you compel me to assume the attitude of command. See, sir, that what I have mentioned, be done *directly*."

Such incidents as these are followed, of course, by mutual coolness at the ward-room and the gun-room table. How much better, then, is it to avoid them altogether, and to let the phrase "*officious interference*" be converted into "*friendly assistance.*"

whether there be "more of wind than rain" in the coming squall,* occasions much of unnecessary annoyance and harassing labour to the people upon deck; to say nothing of the many diseases of which seamen are susceptible, from remaining two or three hours in their wet clothing.

## PREVENTER BRACES.

It were desirable to establish as a general rule, that when the top-sails are *treble-reefed*, the preventer braces are to be placed on the yards, and that the relieving tackles in the gunner-room be placed at hand, ready for hooking to the tiller.—Vide *Gunner and other Officers.*

## ATTACHED TO A FLEET.

Charge of the Deck.—When the officer-of-the-watch has once taken charge of the deck,†

* An officer familiar with those *warning* indications which the heavens so constantly present, added to the precaution of deputing the mate-of-the-watch to consult occasionally the barometer below, may spare to the seaman and marine many a "wet jacket."

† At night-time, it is not desirable for the officer-of-the-watch to depart the deck for the purpose of calling the captain, or making him acquainted with passing events. The mate-of-the-watch, or an intelligent midshipman, may be deputed to communicate with the captain, or to convey instructions.

nothing should induce him to leave it until regularly relieved, and his successor be put in full possession of his trust. The heedless haste in which the young lieutenant is sometimes seen to resign his charge, as if to seek *sleep*, before his successor is yet *awake*, is sufficient to justify the severest official censure.

## CONVERSING ON DECK.

To prevent the possibility of the mind of the officer-of-the-watch being abstracted from the responsibility of his sacred charge, he should strictly avoid all interchange of conversation on deck. Attention to the steerage, and sails of the ship, together with the preservation of the vessel's station in the line, (if attached to a fleet,) will be found sufficient occupation for even the most active or inquisitive mind.

Should the ship form part of a fleet or squadron, the officer resigning to another the charge of the deck, should be particular in pointing out the exact position of the admiral, and those of the immediate leader a-head, and the ship next in succession astern. He should also put his relief in possession of every information touching the manner and

means best calculated to keep the ship in her station.*

TAKEN ABACK, IN THE ORDER OF SAILING.—Should the wind head, or neglect on the part of the helmsman cause the ship to be taken aback, and it be necessary to brace round the head-yards "to box her off," a musket should be immediately fired from abaft, to draw the attention of the ship next in succession astern. Two lights abaft, and one forward, should be also shewn, to indicate the position of the ship's head. The lights should be kept in this position until the ship be fairly full, and has again "gathered way through the water."

## LINE OF BEARING.

To preserve, when sailing large, or by the wind, vide *Captain*—"Tactics."

## SUCCESSIVE MOVEMENTS.

WHEN the fleet is about to execute any evolution in *succession*, such as tacking, veering, or altering

* The idle and inconsiderate practice pursued by some officers, of permitting the ship to drop astern, or to remain *out* of her station, until the watch is nearly expired, and then setting all sail to recover lost ground, has frequently brought the officer-of-the-watch into "troubled waters." A quadrant on the forecastle will always indicate the drawing-up or dropping of one vessel on another.

course,* particular attention must be paid to preserve the appointed distance between ship and ship in the different columns. This can only be effected by shortening, or increasing sail; for, when a ship tacks, or hauls closer to the wind, it is manifest she will require an increase of sail to preserve her proper distance from her follower astern. Whilst, on the contrary, when a ship is to keep away from the wind, it will be requisite to shorten sail, in proportion as her rate of sailing is increased by "going large."

## SHIFT OF WIND.

SHOULD the wind *head*, and so derange the order of sailing as to require the line or lines to be *formed* anew, the attendance of the commander, first-lieutenant, and master, will be required upon deck.—Vide "Tactics"—"Shifts of Wind."

## FLEET ENVELOPED IN FOG.

WHENEVER the fleet becomes enveloped in fog, measures should be taken to prevent separation

* In hauling closer to the wind, it sometimes becomes necessary for the follower astern to bear away a little more from the wind from her first course, while her relative leader a-head hauls to the wind; but the extent of this practice will depend on the number of points required to be altered in the change of course.

from the admiral's ship, and coming in collision with other vessels. To avoid the first, and to ensure the hearing of the signal guns of the admiral or commander-in-chief, all noise and hammering, proceeding from artificers' work in the waist, should be immediately stopped. So long as the wind remains steady, and ships are presumed to retain their relative positions of sailing in the line, the prevalent practice of beating the drum,* or ringing the bell, according to the tack on which the fleet is formed, should be resorted to as seldom as possible.

## UNATTACHED TO A FLEET.

THE SHIP'S COURSE.—Unless to avoid a sudden danger, the ship's course never should be changed without special directions from the captain. When the master expresses a desire to "alter the course," such desire should be *sanctioned* by the captain before the movement be made.—Vide *Master*.

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* The drum may be beating, or the bell ringing, at the very moment the commander-in-chief may be *firing* guns, to direct a necessary and important evolution. The officer-of-the-watch should also be fully prepared to make or shorten sail on the sudden.

## VESSELS SURPRISED ON OPPOSITE TACKS.

"In cases of surprise and danger, from the accidental meeting of two ships on *opposite* tacks in the night, it too often happens that officers are more apt to give orders to the stranger, than to take any measure of precaution *themselves*,—such as *hailing* to put the helm up, or down, and to clear them, when they may be as much in fault,* and possess the same means of extricating themselves from the difficulty. In situations of this sort, it is much better that *both* parties should put their helms *down*, rather than up; the ships will approach each other for a time, but will diminish velocity, and afterwards separate."†

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* Obstinacy or want of judgment in the directing parties, frequently leads both vessels to bear-up at the same instant, consequently causing immediate collision. It is a universal rule with seamen, that, where there is doubt, the vessel upon the *larboard-tack* is to *bear-up* or *heave-about*, for the vessel on the *starboard-tack*. Were this prudent regulation strictly adhered to, and never violated by the obstinacy of parties, accidents would seldom occur. But it sometimes happens that incidental circumstances induce both parties to risk a "trial of skill," by one endeavouring to weather the other. In these cases doubt and hesitation generally prevail, and disaster is sure to follow.

† Admiral Ekins on *Tactics*.

## A MAN OVERBOARD.

"If the ship be going free, and particularly if fast through the water, it is recommended to bring-to with the head-yards a-back. It is obvious, if the main-yard be left square, the ship will be longer "*coming-to*," will shoot farther, increase the distance from the man, and add materially to the delay of succour. It will, however, require judgment, especially if blowing fresh, to be careful and right the helm *in time*, or the ship will fly-to too much, gain stern-way, and risk the boat in *lowering*." *

"The best authorities recommend that, if possible, the ship should not only be hove a-back when a man falls overboard, but that she ought to be brought completely round on the other tack. Of course, sails should be shortened in stays, and the main-yard left square. This plan implies the ship being on a wind, or from that position to having the wind not above two points abaft the beam. The great merit of such a method of proceeding is, that, if the evolution succeeds, the ship,

* Captain A. Griffiths.

when round, will drift right down towards the man. And, although there may be some small risk in lowering the boat in stays, from the ship having, at one period, stern-way, there will, in fact, be little time lost if the boat be not lowered till the ship be well round, and the stern-way at an end. There is more mischief done generally by lowering the boat too *soon*, than by waiting till the fittest moment arrives for doing it coolly. And it cannot be too often repeated,—that almost the whole depends upon the self-possession of the officer-of-the-watch."*

* Captain Basil Hall.

# PRACTICAL HINTS.

## TACKING SHIP.

THIS evolution is too often regarded in the light of a mere "*John-Hamilton-Moore*" manœuvre. The preparatory phrase "Keep the ship *full* for stays!" becomes a necessary caution to assist the action of the rudder; but a variety of incidental causes must first be considered by the seamen to ensure the *staying* of the ship; viz., a strong breeze, —a head sea,—ship light forward, and carrying a slack helm, and a swell upon the bow, or beam.

Under any of these circumstances, the officer working the ship should "watch a smooth," before he orders the helm to be "*eased* down;" and never check the head-braces till the luff of the fore-top-sail begins to shake. Nor, in a head-sea, should the

fore-top-bow-line be let go;—this practice tends to impede too soon the ship's way through the water, and consequently to neutralize the action of the rudder. Although in *smooth* water it is always desirable to haul the *after* yards when the wind is a little on the *weather*-bow, yet it is not advisable to follow this practice when tacking in a head-sea, with a swell on the bow, or when the ship manifests a disposition to be *sluggish* in stays. When tacking with a strong breeze, and a "topping-sea," particular attention should be paid to the helm, that it be *righted* in time before the ship gathers stern way.* The pintles of rudders are constantly damaged, in consequence of officers permitting the helm to remain *a-lee*, instead of righting it a-midships, after the vessel has lost her way. If the ship cannot be brought round by the assistance of her sails, it were better to have recourse to the evolution of wearing, than to endanger the *efficiency* of the *rudder* by this reprehensible practice.

## WEARING SHIP.

In wearing in a strong breeze, the officer working the vessel is cautioned *not* to put the helm *up* until the weather main-brace be rounded in, so as to allow the yard to get the "*start*" of the *wind* before it becomes *abaft* the beam. But in rounding-in the weather main-brace, care should be taken not to shiver the main-top sail. The fore-tack should be raised, and the sheet

* Dependence is not to be placed in the vane at the mast-head; it seldom indicates when the ship is actually "head to wind." The shaking of the *driver* is the best guide for ascertaining the ship's position with the wind.

eased-off, before the ship brings the wind right *aft*. This will prevent the necessity of "righting" the helm *prematurely*,* and, consequently, of running over unnecessary ground to accommodate the position of the sails. Steady hands should be placed at the weather head-braces, and precaution taken, that as the ship comes to the wind, the yards are not allowed to *fly* forward against the collar of the stays.

## PITCHING.—EASING THE SHIP.

Gower and Griffiths have both exposed the popular fallacy, that in a head-sea the rudder possesses the power of "easing the *pitching* motion of a vessel." "How customary is it," says the latter authority, "to observe the man at the helm easing it down a few spokes, and the officer-of-the-watch *roaring* out 'ease her.'† Ask the generality *why* they do this? and they probably either say, 'to luff her to,' or be unable to assign any other reason, except that "they have *always seen it done.*'" The "roar" of "*Ease her!*" has been too long allowed to pass current afloat, as a sound

* "In blowing weather," says Captain Griffiths, "great attention should be paid in righting the helm at a *proper* time." When wearing with the watch, the same authority very properly recommends the practice of hauling up the lee-fore-clue-garnet at the moment of rising the fore-tack.

† "This practice," says Gower, "must have arisen from its relieving the person who is steering from the weight of the helm, which is greater as the sea passes aft and strikes the rudder; for it is attended with the verbal directions, "*Ease her! Ease her!*" but it does not appear that the *pitching* is the least *prevented*: the helmsman being eased of his burden, it is concluded the ship suffers a general relief. However, it has the advantage of easing the rudder from the sudden jerk of the sea."

of *sense.* It is preposterous to suppose that the *pitch* of the *voice* is to prevent the *pitch* of the *vessel.*

## BRACING YARDS.

ON A WIND.—In trimming yards upon a bow-line, much will depend upon the strength of the wind and the agitated state of the sea. In a strong breeze, accompanied by a "topping-sea," it is sometimes desirable to "keep-in" a little of the weather-braces, in order to lessen the lateral impulse of the vessel. But in *smooth* water, with a steady commanding top-gallant breeze, the yards of no ship can be braced too *sharply* up.

GOING FREE.—When sailing with the wind abeam the head-yards may be braced forward to about 45°, and the after-yards to 42°. When the wind is two points *abaft* the beam,* the fore-yard may be braced to 50°, and the main-yard to 44°.

## TO TAKE IN A TOP-SAIL IN A GALE OF WIND.

SEAMEN are still at issue as to the preferable practice of effecting this service.

WEATHER CLUE-LINE FIRST.—When the mast is not considered in danger, and the object be to ease the ship, or to save the sail, the weather clue may be *first* lifted. But before *starting* the weather sheet, a prudent officer will always take the precaution to ease first a few feet of the *lee* sheet,† in order to lessen

* When the wind is abaft the beam, the after-yards should be braced more *forward* than the head-yards, so as to omit the wind filling the sails on the fore-mast.

† The operation of easing the lee-sheet may be attended with difficulty, unless the rope be belayed in a manner to admit of

the labour of rounding-in the weather-brace. So soon as the lee-sheet be sufficiently eased as to admit of the yard coming *in* with the weather-brace, and that *both* bunt-lines be as well manned as the weather clue-line, the weather sheet may be then eased off, and the weather clue-line hauled up with every prospect of saving the sail.

LEE CLUE-LINE FIRST.—If there be plenty of sea room, and the ship can be kept away, some officers recommend the practice of bringing the wind abaft the beam, and then hauling up the *lee* clue-line first,—taking the precaution to have *both* bunt-lines well-manned. When this operation is effected, the weather clue-line may be hauled up, rounding the brace in as the ship is again gradually brought to the wind. It will require particular attention to the helm when hauling up the weather clue-line,—though, with judicious management, the helm alone is sufficient to *spill* the sail.

## TO TAKE IN A COURSE IN A GALE OF WIND.

IT is a common practice, in clewing-up a course, to let go the *bow-line* upon starting the tack. Neither the tack nor the bow-line should be *let go*, but each eased handsomely by hand. By the adoption of this practice, the sail will bag less to leeward, and the weather clue be hauled up with greater ease; but both bunt-

its being eased handsomely by hand. For this reason, the officer who anticipates the necessity of taking in a top-sail in this manner, will do well to cause the easing part of the *lee*-sheet to be taken round the whelps of the capstan, and afterward to the cleat or cavil employed for securing the fore or main sheets.

lines should be manned, and even *better* manned than the weather clue-garnet. When the latter geer is well up, walk away with the lee clue-garnet, easing steadily the sheet. But all these precautions will be of little avail, unless there be a good preventer-brace upon the lower-yard; or that the yard-tackle* be hooked to act as such, and brought sufficiently *aft* to prevent the tackle bringing too great a strain in an up-and-down position upon the upper yard-arm.

## TO TAKE IN A LOWER STUDDING-SAIL BLOWING FRESH.

THIS is a much nicer operation than young officers are inclined to admit, and unless executed with caution and skill† on the part of the lieutenant "carrying on the duty" on deck, the probability is the top-mast studding-sail-boom will *snap* short in the iron, and that the sail, swinging-boom geer and all, will have to be recorded in the log as "*expended.*" When not sailing

* Yard-tackles, when used for the purpose of preventer-braces, are seldom hooked sufficiently *aft.* Preventer-braces, properly fitted, are at all times to be preferred to heavy yard-tackles. On wearing, or being taken a-back, or having to brace round the lower-yards in a hurry, yard-tackles become most unwieldy geer.

† A professional writer says, that "a judicious luff, (if with studding-sails set just till their outer leech touch,) at the *precise* moment of giving the order 'shorten sail,' will materially facilitate the performance."

Doctors differ,—why not seamen? But the "*luff,*" indeed, must be very "*judicious*" to produce the desired effect; for if, in a strong breeze, the *outer* leech of the sail be brought suddenly a-back, the boom, from having nothing forward to support the spar, will inevitably *snap* in the iron. The laugh then would be against the *luff.*

in a fleet, and the *yawing* of the ship be a matter of minor moment, the officer-of-the-watch is recommended to proceed as follows :—

Place a steady helmsman at the wheel, and stand close to him—man well the sheet, and lead it well aft along the deck ; see that steady hands attend the tack and guys. When perfectly prepared, direct the helmsman, with a "small helm," to bring the wind gradually on the *opposite* quarter, and the moment the body of the sail begins to lose the breeze, and the canvas inclines to shiver, *lower* the outer halliards, ease the tack, and haul in upon the sheet as rapidly as possible, lowering the inner halliards at the same time. More booms are sprung, and even snapped short in the iron, from the sudden jerk produced by lowering the lower halliards, when the sail is straining and bellying to the breeze, than by even carrying a powerful press of canvas. And here it may be well to impress upon the mind of the young seaman, that there is hardly a situation in which a ship can be placed, that a judicious management of *the helm* will not facilitate the execution of the service sought. Physical strength may be always aided by the commanding power of the helm.

## TO UNBEND A TOP-SAIL IN A GALE OF WIND.

THOSE who know the value of *minutes* to men perched aloft in a perilous position, will adopt that method which will, eventually, cost the least time and the least trouble. The sail should be *first* furled, then detached from the yard, and sent down on deck (slung amidships) by the long-tackle hooked at the top-mast-head, and steadied forward clear of the top-rim by the

weather or lee bow-line, according to the side on which the sail is to be sent down. Should the ship be rolling or pitching to any extent, and it be not deemed prudent to lower the furled sail "*before* all," the top hatches may be opened, and the sail sent down through lubber's hole. This method will entirely depend upon the motion of the ship.

## SCUDDING IN A GALE.

WHEN scudding in a heavy gale of wind, care should be taken that sufficient of *lofty* sail be carried on the vessel to keep her freely and fairly *before* the sea.

The canvas usually carried upon these occasions is, a close-reefed main-top-sail, and a reefed fore-sail:—but there are times when this sail is not the best suited, nor safest for scudding. Ships that steer badly, and manifest an inclination to *yaw*, will be more steadily steered and easily managed when scudding under the fore top-sail and fore-stay sail. Should the ship happen to broach-to, the *fore-sail*, in such a perilous position, is an unwieldy and unmanageable sail to clue up, and when the sea strikes the ship upon the quarter, and causes her head to round-to in the direction of the wind, the main-top-sail tends to *assist* the sea in producing this dangerous movement;—whereas, the fore-stay-sail, together with the fore-top-sail, produces the contrary effect.

As, in scudding, the safety of the ship will entirely depend upon her steerage, the greatest care should be taken that a steady and expert helmsman be stationed at the wheel, and that when his "trick" is out, and his "relief" arrives to take his place, that he *resigns* not his

hand at the helm until his successor be in full possession of the easiest method of steering the ship. The officer-of-the-deck should also direct a compass to be placed in the gun-room, and be cautious that competent seamen there attend to the relieving tackles, and watch closely the steerage of the ship by the compass card.

In frigates, and particularly flush-decked vessels, whose binnacle-lights are liable to be extinguished by the gusty gale, precaution should be taken that lighted lanterns be kept in readiness to supply the place of the blown-out lights. On dark and starless nights, when the steersman has no other guide to govern his steerage than the compass-card, it is of the utmost importance that attention be paid to this particular. In seven cases out of nine, the accident of *broaching-to* may be traced to the "*blowing-out*" of the binnacle lights.

# FLAG-LIEUTENANT.

## PRELIMINARY REMARKS.

It too often happens that this officer considers his situation as a sinecure, the passport to which is *interest* rather than *merit*.. The former, indeed, frequently governs the appointment, while the latter is overlooked. But were the serious responsibilities of the flag-lieutenant duly considered—were the various requisites he should possess properly estimated, the choice would fall, not on the man of connexion, but on him who could manifest the greatest professional skill.

The flag-lieutenant should be conversant in the routine of every duty afloat, an adept in briefly communicating orders by signals, and, above all, a thorough master of the evolutions of a fleet. He is the admiral's aid-de-camp.

# IN PORT.

## CIRCULATION OF WRITTEN ORDERS.

PERIODS best suited for the promulgation of public orders, or of copying "circulars," are too seldom consulted by this officer. Lieutenants too are sometimes summoned to copy "orders," which might be more appropriately copied by the midshipmen of the fleet. Before the flag-lieutenant calls upon officers to undertake duties in opposition to *time* and *tide*, he should ascertain whether the nature of the service demands such pressing attendance.*

* This inconsiderate and ill-timed call for officers to copy orders (possibly a *rescinded* "circular") constantly causes a small vessel, when blowing fresh upon a lee-tide, to *despatch* a double-banked boat's crew to convey the *copying*-officer on shore. Thus is a vessel liable to have her ablest hands broken off from an essential duty, because the flag-lieutenant has not sufficient discrimination to perceive that the *important* document might be copied at a more suitable period, and one less calculated to excite discontent, and to impede the "fitting" of the ship.

# AT SEA.

## CEASELESS SUCCESSION OF SIGNALS.

A CEASELESS succession of signals not infrequently fails to attract attention. A well-timed signal is like a well-timed mandate,—one word of command is worth a thousand repetitions of verbose blustering.* The same remark is equally applicable to orders and directions conveyed through the medium of signal.

* This officer sometimes indulges in the erroneous supposition that so long as he parades the poop, keeps the signal-halliards constantly "stirring," and the bunting "flying in all directions," he "renders the state some service."

The following anecdote will suffice to illustrate the force of the above observations:—"On one occasion the 'Excellent' was directed to weigh, when off Cadiz, and to close with the admiral's ship; and, in running down, the signal was made *five* or *six* times for altering the course, first on one side, and then on the other,

## TACTICAL MANŒUVRES.

Upon all matters touching the movements and manœuvres required to be performed by the several ships composing a fleet, the flag-lieutenant should be perfectly competent to communicate, by signal, the intentions of the commander-in-chief. In performing tactical evolutions, false movements and misplaced positions constantly occur from inability on the part of this officer to select the proper signal necessary to direct the desired movement.

To remove this reproach, this officer is counselled to exercise his mind in evolutionary movements,—to acquire a proficiency in that portion of tactics which treat of the restoration of a dis-

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and at length for a lieutenant. Captain Collingwood, who had been observing this in silence, ordered his boat to be manned, as he would go too. On his arrival on board, he desired the lieutenant, when the order was copied, to bring it to him; and he read it while he was walking the quarter-deck with Lord St. Vincent and Sir Robert Calder. It was merely an order for the 'Excellent' to receive on board two bags of onions for the use of the sick; and, on seeing it, he exclaimed, 'Bless me! is this the service, my lord?—is this the service, Sir Robert? Has the *Excellent's* signal been made *five* or *six* times for *two* bags of *onions?* Man my boat, sir, and let us go on board again!' and though repeatedly pressed by Lord St. Vincent to stay dinner, he refused, and retired."—*Lord Collingwood's Letters.*

turbed "order of sailing," or the renewal of a "line-of-battle," broken by shifts of wind.—Vide Chapter "Practical Hints," under the head of "Shifts of Wind."

## REPORTS.

MORNING.—It is the duty of this officer to report, at day-light, to the captain of the fleet, the exact position and order of the several ships composing the different columns, in the order of sailing. He should also represent to his superior any apparent irregularity in the relative distances the ships of the fleet are required to preserve. Those not considered in their respective stations should not only be reported to the captain of the fleet, but also regularly noted in the "Remarks" of the signal log,—stating particularly, the *time* the vessel is first discovered to be out of her station, as well as the exact period at which it is resumed.

EVENING.—The position of the fleet,—ships detached, whether on the "look out" or in chace, together with strangers in sight, are reports which at sun-set this officer is required to make to the captain of the fleet. Upon the same occasion, it is customary for the flag-lieutenant to lay the "*signal-*

*log-book*" before his superior.—For "Preparations for Night Signals," vide *Signal Midshipman, at Sea.*

## EXERCISE OF EVOLUTIONS ALOFT.

WHEN the ships of the fleet are exercised in evolutions aloft, and the "*time* be given," through the medium of signal, the flag-lieutenant should never resort to the partial and deceptive practice of keeping the "*preparative* flag" flying for several seconds after the movement has been commenced on board of the admiral's ship. This is an unfair advantage, which no flag-officer who can appreciate emulative exertion will ever sanction.*

## FOG AND NIGHT SIGNAL GUNS.

IN making fog and night signals through the medium of sound, or rather the report of cannon, the flag-lieutenant is strictly cautioned to cause the signal guns to be discharged on the *same* side of the ship. This is of the first moment, particularly when the purport of the signal is immediately made

* Young officers are in error when they think old eyes are unable to detect this deceptive practice. — The hint is well intended; emulation should never be "robbed of its fair proportions."

to depend upon the interval of *time* which elapses between the reports of the several guns intended to be discharged. For, if two guns be fired from to windward, and two guns from to leeward, (*four* reports composing the signal,) a sensible difference will take place in the position of the sound. The first and second weather-guns may be altogether lost to the ear, and the *third* report, which will be the *first* gun fired from the *lee* side, may be taken for the *first* report of a signal supposed to be conveyed by the medium of two *equi-distant* discharges.*

## TELEGRAPHIC SIGNALS.

VIDE article, addressed to the *Captain*, "Communicating by Signals;" also "Telegraphic Signals," under the head of *Signal Midshipman.*

* "Significations" have been often mistaken from the report of guns "going for nothing." It is to be hoped, that the hint here will go for *something.*

# FIRST-LIEUTENANT.

## PRELIMINARY REMARKS.

"FORESIGHT, FIRMNESS, TEMPER, & METHOD." These words should form the motto of the first-lieutenant. Possessed of the first, he will seldom be taken by surprise, but will have anticipated, either wholly or in part, whatever circumstances require prompt and decisive measures.* The

* The following anecdotes are given in illustration of the above, and will demonstrate the necessity of *foresight*, not only in respect of the vessel under the charge of the first lieutenant, but as regards others. The "C—q—r" (seventy-four) had been just commissioned at Sheerness, and the "M—d—g—r" frigate was refitting in the same port, and moored at a little distance from the former. The first-lieutenant of the "M—d—g—r," seeing a *man fall* from the main-mast head of the "C—q—r," and suspecting that a ship so newly commissioned might not have a medical officer on board, (which turned out to be the case,) immediately despatched the gig of the frigate with the assistant-surgeon and

second will confirm his character for efficiency, ensure a due obedience to his orders, and preserve the necessary discipline of the ship. By a manifestation of the third, (a quality scarcely less essential than the others,) a cheerful alacrity in the execution of arduous duties is ensured; while, by the fourth, labour is lightened and despatch promoted. It may not be superfluous to add to the above, that, as this officer is the president of the ward-room mess, the decorum and general comfort of the table will depend mainly on the gentlemanly manners of the first-lieutenant. Whenever his authority may be required to repress conversation on topics* likely

necessary apparatus to the vessel in question, and by this prompt measure saved the life of the man who had fallen from aloft.

On another occasion the same officer, perceiving a frigate getting under weigh, and, from the direction of the wind and run of the tide, conjecturing that the ship would cast the "wrong way," and consequently ground on a neighbouring shoal, instantly prepared the stream-cable and anchor, and despatched the launch to the frigate. No sooner had the boat reached alongside with the necessary means of assistance, than the ship *struck on* the *shoal*; and the captain, not imagining it was possible that relief could be already at hand, ordered a gun to be fired as a signal for aid. His astonishment at finding that the calamity and the succour occurred simultaneously may be easily conceived.

* The prevailing disposition to discuss politics afloat is truly deplorable. In former days, it would have been difficult to find a naval officer competent to define the difference existing between Whig and Tory; but now, party questions are introduced at table, and disputed with a warmth and testiness of temper that would hardly be tolerated *even* in St. Stephen's.

to lead to irritation, his interference should be *timely*, and tempered by address and mildness, or otherwise he may only fan the flame he seeks to extinguish.

His interposition, indeed, upon all occasions, should be cautious and considerate, and never employed unless on the most urgent necessity. In speaking of the duties of the lieutenant-of-the-watch, that officer was admonished not to shew impatience or testiness of temper, should his superior offer any suggestion during his charge of the deck; but if this subordination be necessary on his part, so should the senior officer bear in mind, that he should not interpose his authority except when absolutely called for, and never display it officiously or vexatiously. He is, however, on all occasions, to consider himself the *executive* officer, through whom all points of service must be fulfilled.

# GENERAL DIRECTIONS.

## COMFORTS AND ACCOMMODATION OF THE CREW.

THE first consideration of this officer should be the personal comforts of the crew. When the fore-mast-men perceive that the chief directing officer has their comforts at heart, that officer may rest satisfied that he can always command a *willing* obedience on occasions when an extraordinary exercise of physical force is required. The senior lieutenant should also afford to the subordinate officers every accommodation which may add to the respectability of their several stations.

## MAINTENANCE OF SYSTEM.

THE commissioned, warrant, and petty-officers should be severally impressed with the necessity of

observing *system* in the execution of every service. System can never be maintained afloat, unless the heads of departments consult with the senior lieutenant, prior to the performance of contemplated duties.

## DAILY REPORTS* AND INSPECTIONS.

A RIGID observance touching "Reports" of service *performed*, is highly essential in the maintenance of order and discipline. "Reports" should not be considered, nor received, as mere matters of *form*. There is a wide difference between things done, and things left "undone."†

## ROUTINE OF DUTIES.‡

REGULARITY in the routine of ordinary duties should be studiously observed. However trivial the service, or light the labour, it behoves this officer to be punctual in carrying into execution the desired

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* Vide formula at the close of this chapter.

† For example, the mate-of-the-lower-deck may "report" to his superior the hammocks as "*all hung up*;" when, had the *inspecting* officer first stepped *forward*, instead of aft, from his berth, his eye might have lit upon half-a-dozen of hammocks lying under the fore ladder in close contiguity with the *sweeper's* basket.

‡ A formula will be found at the end of this chapter, which may serve to illustrate the manner in which *routine duties* may be carried into effect

task. In varying the time for the discharge of ordinary duties, the variation should never appear to proceed from the dictates of *caprice*. Regularity is the soul of the service.

## PRESERVATION OF SILENCE.

In the execution of evolutionary movements, the strictest silence should be observed. Were the junior lieutenants in their respective stations to indulge less the disposition to *hail* aloft, duties would be better performed, and the discipline and *character* of the ship be better preserved. On no account should petty officers be permitted to call from the deck to the tops, or to the mast-head. The practice of allowing the fore-mast men to hail aloft upon every occasion that a hauling-line may be required, speaks little for the internal discipline of a vessel-of-war. Nor should the top-men's predilection to sing out from *aloft* be at all indulged. Ropes are much sooner disengaged on deck by means of a *tell-tale shake* from* overhead, than

* A first-lieutenant, celebrated for his love of silence afloat, was accustomed to follow a practice well calculated to insure *taciturnity* aloft. He made it a rule never to set a bad example by roaring out *silence* himself, knowing full well the little worth of words upon these occasions. When a topman indulged in chatter aloft,

by indistinct hails, or shrill shouts from the mast-head.

## INDISCRIMINATE CALLS.

VIDE *Midshipman.*

## THREATS OF PUNISHMENT.

THERE is in some men an infirmity with regard to perpetual threats of punishment, which constantly places the threatener in what may be termed a false position. In the heat of the moment such men indulge in unguarded language, which is generally followed up by strong asseverations to have the party addressed "severely punished." Such manifestations of uncontrollable temper pro-

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or hailed the deck from the mast-head, the name of the "roarer" was quietly noted, and nothing said of the matter till the ship returned to port, and the offending party applied for leave on shore.

"I hope, Mr. ———, you'll grant me liberty ashore—I've always done my *dooty* like a man."

"You have always done your duty like a *noisy* man, and therefore you don't go."

"I never remembers makin no noise, sir."

"I know *you* don't, but *I* do. Do you remember Friday fortnight, at two bells in the forenoon watch, bellowing out, like a bull, 'Let go the larboard main-to'-gallant clue-line!'? Now, my man, you well know that shouting from aloft is contrary to orders, and that a good *tell-tale* shake of the rope would have had it much *sooner* disengaged on deck." The same officer adopted a similar system with young gentlemen of *wordy* habits: those who exercised their *lungs* afloat, were seldom permitted to exercise their *legs* ashore.

duce no other effect upon the fore-mast-men save that of an unfavourable opinion of the utterer's self-possession, added to a total, though silent, contempt for his waste of words. Threats of punishment are always bad, particularly, as the threatener has seldom reason, on his side, to support his menace, or rather the infliction of a punishment promised in a moment of heat or irritable mood of mind. And here it may be recommended to the young officer, never to permit an expression to escape him which may afterwards involve his character for adherence to truth. An officer should never break his word, and particularly with British *seamen*.

## COMPLAINTS.

Complaints should be submitted to the senior lieutenant; and, on these occasions, the exercise of no ordinary discretion will be required on the part of this officer to maintain discipline, and satisfy the ends of justice. Officers have constantly to listen to complaints of the most *trivial* nature, which the complaining party, in a less irritable mood, would probably dismiss from his mind, as unworthy of official interference. Under these circumstances, the senior lieutenant had better reserve his decision

till more of coolness be displayed on the part of the complainant.

## THE USE OF IRONS DEPRECATED.

Irons for confining prisoners should seldom, if ever, be resorted to, except in cases of serious crime. Men have been "clapped into irons" for offences comparatively of a trifling nature, even in instances when the offence has been committed at sea, and the custody of the offender of little moment.* By this practice the ship is deprived of the man's services pending confinement for petty offences, for which an allotment of extra duty might be substituted with the best possible effect. Moreover, it should not be forgotten that the confinement itself is no trivial punishment, and that every punishment pre-supposes crime. The prisoner has, subsequently, to undergo a trial for his offence, and possibly may prove himself innocent, to the full satisfaction of all parties. The system of con-

* "Irons," says Captain Griffiths, "are at all times a disgusting sight. If circumstances do not allow of complaints being investigated at the time, let the master-at-arms report the offenders as prisoners at large; they then perform their work, sleep in their hammocks hung up, and, if pronounced innocent, no injustice is done to the individual."

sidering offenders in the light of prisoners at large, will always afford to the commanding officer an opportunity to exercise some well-timed act of clemency. Serious offences, subversive of discipline,* are not, however, recommended to be overlooked.

## CLEANLY CONDITION OF THE SHIP.

WASHING DECKS.—A vessel-of-war should be strictly clean, and by her internal and external appearance indicate that order and regularity reign within. Let not utility be sacrificed to *show*. Slopping, scrubbing, and stowing, are pastimes too prevalent on board of His Majesty's ships. Such pursuits may delight the heart of the senior lieutenant, but they contribute little to the health or comforts of the fore-mast men; were this officer more often to bear in mind the *season* of the

* In large ships, when folk indulge "a little in the like o' *likor*," and are consequently loud in language calculated to offend "ears polite," the local habitation of the declaimer should undergo change. Declamation has been often practised in private in the regions below. In former days, before "*the march of intellect*" found its way afloat, declaimers were wont to be consigned to the coal-hole; and the admirers of a certain senator, celebrated for his "love of *liberty*," were frequently doomed to descant upon his doctrines, albeit without an auditory, between "wind and water."

year, before he proceeds in the "ways of water," and the sports of sand, less of dissatisfaction and sickness would prevail afloat.*

Dry Holy-stoning.—The propriety of pursuing this system of cleansing the under-decks has long been disputed by officers who have studiously sought the preservation of their people's health. Those who deprecate the practice, contend that, during the process of grinding the heated sand into the grain of the planks of the deck, a considerable quantity of gritty sharp particles is inhaled by the "stoners" on their knees.

Dust, in any shape, is always injurious to health; and in cleansing the under-decks, the only question to determine is, which is the *lesser* evil of the two, *dust* or *damp*. In wet wintry weather, if decks be cleaned through the common-place medium of cold

* In well-regulated ships, the operation of "stoning" the decks in winter is never performed by the people composing the morning watch. If the ship be in harbour, the decks are stoned twice in the week, commencing immediately after breakfast, with all hands, or by a general muster at quarters. By pursuing this system, the decks are permitted to dry, and not doomed to become damp and water-soddened, by wetting them before there be drought in the air. Ships on the home-station, whose decks in the winter season are washed in the morning watch, seldom can boast of a *dry* plank between the months of October and April. This fact is in itself sufficient to win converts in favour of the practice here recommended.

salt-water, they will remain moist during the entire of the day, and humidity between decks is sure to produce disease. On the other hand, the clouds of floating dust in which the fore-mast men are enveloped whilst *whitening* (not purifying) the planks of the deck, must materially affect the eyes, if not the *lungs*, of the several grinding* gangs distributed fore and aft the vessel.

Between the two methods of cleaning the lower-deck, some officers have pursued a system which in all weathers has been found to work well.

The method is as follows:—As soon as the ship's company have breakfasted, (the meal commencing at seven bells in the morning watch,) the ship's cook heats a sufficient quantity of salt-water in the coppers, which, when nearly boiling, is distributed in portions to the different messes fore-and-aft on the lower-deck. Hand-brushes are then employed to scrub the deck; whilst other parties, with pieces of old blankets or woollen rags, soak up the fluid. When the work is completed, the people are ordered to retire upon the upper-deck, whilst wind-

* An inconvenient result follows the labour of dry-rubbing, of which possibly the uninitiated are not altogether aware,—namely, perpetual *scratching*. Naturalists say fleas *thrive* in sand, and are always "industrious" in *dusty* regions.

sails or stoves are placed to dry the "tween decks" below. But, with hot water, stoves are seldom requisite. The weather must be very humid if the planks of the deck do not almost immediately dry, because evaporation is the quicker in proportion to the heat of the fluid employed. In summer weather, or in warm climates, the practice of dry-rubbing the decks should never be resorted to.

## TEASING THE TIME.

THE practice of constantly working the ship's company with the view "to keep the *devil* out of the minds of men," as little-minded men imagine, is, to say the least of it, false philosophy. He that pursues such system, knows little of the nautical character, and of human nature certainly less.

"Refitting, squaring yards, stowing stores, working boats, and drying sails, with all the minor minutia daily incidental to a ship-of-war, leave little of leisure for the repose and recreation of the crew. Seamen know well enough what is necessary, and therefore do not relish a too frequent mustering of hammocks and bags, stoning of the decks, and other artificial modes of teasing the time." *

* Published Letter of Captain Philip Beaver.

## SUBSTITUTING THE HANDS FOR THE WATCH.

WHEN the physical strength of the watch is unequal to carry into effect a heavy evolution, and it be required to "turn the hands up" to perform the service sought, the first-lieutenant should studiously* avoid keeping the "watch below" *longer* on deck than is absolutely necessary.

## EXERCISING THE YOUNG GENTLEMEN ALOFT.

Two days in the week should be set apart in all ships for the exercise of the young gentlemen in evolutionary duties aloft; and in this practice† of

* A ready disposition to relieve "the hands" from unnecessary labour is soon perceived, and always appreciated by the fore-mast men. Indeed, the hands should never be turned up, or the people disturbed from their private occupations below, unless it be manifest that the physical strength of the watch upon deck is too feeble to perform the duty required. "Turn the hands up!—*in this!*" or "*out that!*" is a mandate which has hitherto been too "trippingly on the tongue" of the first-lieutenant.

† The advantage of practice over theory is manifest. "How many midshipmen," says the author of '*Points of Seamanship*,' "nay, lieutenants, perhaps captains, are there, who never sent up or down a top-gallant-yard or mast in their lives? A midshipman is usually stationed in one of the tops, in order that he may learn the duty of a seaman. What does he do there?—Takes his station on the main cap, calls out 'Haul out to windward!' 'Bear a hand!'

the art of seamanship and that of rigging, care should be taken by the commanding officer that such exercise is not to be considered (as is too frequently the case) in the light of punishment for misdemeanors on the part of the midshipman, but purely as a necessary instruction to form the seaman and constitute the officer.

## EXERCISING YOUNG GENTLEMEN AT GREAT GUNS.

STATED days should be devoted to the instruction of young gentlemen in gunnery, and they should be compelled to work and exercise a gun on the forecastle, under the immediate superintendence of an officer competent to impart instruction; and whenever the ship's company fire at a mark, the midshipmen should be allowed to practise at the target.

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'Lie in off the yard!' and 'Down out of the top!' And in this is comprised the whole of his exertion."

When the first-lieutenant, as is by no means an uncommon occurrence, complains that he "has not a midshipman whom he can trust in the execution of a single service connected with seamanship," he should bear in recollection that the *fault* rests more with himself than with the young gentlemen whom he so impatiently denounces.

## FORMULA OF DAILY REPORTS.

### MORNING.

BOATSWAIN: Rigging—Sails—Anchors, and Boats—State of.

CARPENTER: Spars—Decks, &c., State of.

GUNNER: Main-yard-guns—Ports—up or down.

10h 30m, A. M. OFFICERS: Superintending Divisional Quarters—Report Guns, as exercised and secured.

### EVENING QUARTERS.

COMMISSIONED OFFICERS: Report people at their respective quarters sober—Gun-geer and implements properly placed for action.

MASTER to report wheel-ropes effective—Relieving-tackles at hand—Stoppers &c. in readiness for service.

BOATSWAIN: Rigging-stoppers—Luff-tackles at hand—Toggles on the lower and top-sail braces—Earings and sheets effective—Standing and running-rigging fit for service—And boats clear.

CARPENTER: Pump-well — Ports — Boats —Hawse—Bucklers — Wings — Fire-screens — Fire-engine — Pumps—Shot-plugs.

GUNNER: Guns — Gun-geer — Magazine-men — Life buoy.

SIGNAL MIDSHIPMAN: Triangle traced up — Signal Lanterns ready for service—Two guns unshotted on each side of the main-deck—Rockets and blue lights ready.

SECOND MASTER, or MATE OF THE LOWER DECK; Tiers clear—Spare-sails ready for sending aloft.

MASTER-AT-ARMS: Hatches—Steward-room and store-room locked.

## DUTIES ASSIGNED TO EACH DAY IN THE WEEK.

MONDAY: Scrub hammocks—Watch on *deck* to be exercised at a division of guns—forenoon or afternoon, as may be directed by the commanding officer.

TUESDAY: General exercise of sails—If in harbour, loosing and furling for half an hour, during the fore-noon watch—If at sea, making and shortening sail for the same interval of time, during one of the dog-watches. When the ship's company become practised in these operations, once a fortnight will be sufficient to follow up either exercise.

WEDNESDAY: Boats' covers to be scrubbed; also, oars with sand—Small-arm's men to be exercised for half an hour in each watch—the watch on deck only.

THURSDAY: Ship's company to mend clothes—Young gentlemen to be exercised at evolutions aloft.

FRIDAY: Boats' crews to fall-in armed, and to be exercised with cutlass and musket.

SATURDAY: Wash lower-deck—Young gentlemen to be exercised at a gun on the forecastle. Evening, —Ship's company to sling clean hammocks.

N.B. The bedding of the men to be aired the first Saturday in each month.

SUNDAY: Divisions—Church, &c.

# FIRST COMMISSIONING.

In order to prevent repetition in detailing those duties incidental to a vessel's "*first fitting*," as well as to preserve that classification so essential to a work of this nature, the first-lieutenant will frequently be referred to those chapters addressed to officers inferior to himself. And in this place it may be necessary to remark, that in the progress of a ship's equipment, the senior lieutenant will neither be in error, nor in any way in arrear, if he enforce from the heads of departments a strict observance of those injunctions relative to *pre-arrangement* on all matters connected with the execution of duties.

## HOISTING THE PENDANT.

SHOULD the senior lieutenant be the first officer to arrive at the port in which the ship is about to be commissioned, he will be required to proceed forthwith to the commander-in-chief, and apply for authority to hoist the pendant. Thus authorized, he should repair to the office of the superintendent, of whom he will receive the desired symbol of commission; which is to be hoisted, upon obtaining the sanction of the superintendent.

## OFFICIAL DEMANDS.*

IN the event of the captain's clerk, or purser, not being present upon commissioning the ship, the circumstance should be made known to the commander-in-chief. No impropriety can be imputed to the application for a clerk from the flag-ship, to perform, *pro. tem.*, the indispensable duties incidental to commissioning.

## ABSENCE OF THE CAPTAIN.

IN the absence of the captain, it will be the duty of the senior lieutenant to make his appearance every

* Vide CAPTAIN'S CLERK.

morning at the port-admiral's office, to inquire for orders, and receive instructions upon any particular point which the commander-in-chief may deem expedient, touching the vessel's equipment.

In the entry of men, care should be taken that such as may desire to volunteer for the ship be not deserters from other vessels-of-war, and that they can shew satisfactory certificates of capacity* and conduct.

## STOWAGE OF BALLAST AND TANKS.

VIDE—*Master* and *Carpenter.*

## DOCK-YARD ARTIFICERS.

VIDE—*Carpenter.*

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* The senior lieutenant should not neglect to interrogate individuals touching their professional pretensions. Many men-of-war's men, upon desiring to enter, assert that they can hand, reef, and steer, "and, moreover, that they have *served* their time to the sea;" yet, when their pretensions are put to the test, they can neither take the helm, heave the lead, pass an earing, nor strop a block. Upon these occasions, an officer of discernment will soon discover the difference between a *self*-satisfied seaman and a seaman that will satisfy the service. A lead-line put into the hands of blue-jackets of this stamp will readily remove doubt, and decide the *ordinary* pretensions of the "A. B.'s" ability. But the manner of shaping professional questions should never partake of sneer; nor should the interrogated be ever derided. A practical mariner will never put to an individual whom he suspects to be a thorough seaman any question that will not produce a reciprocal feeling of respect for the professional abilities of both.

## STOOLS AND TABLES OF THE MEN.

THE stools and tables allowed to the ship of the line, should be fitted on a totally different principle from that which is usually adopted for the use of the frigate and the flush-decked vessel. Tables of the ship of the line may be so constructed as to admit of their being traced-up between the beams overhead; and also to allow the *two* mess-stools to lie *over* them in a *flat* position. By fitting to the legs of the stools *hinges* which will permit the former to fold flat, the stools may be readily placed over the traced-up tables. Upon the important occasion of clearing for action, the practical utility of the principle will always *tell.*

## PROGRESS OF EQUIPMENT.—SPECIFIC DUTIES.

IN apportioning specific duties for the day, much will depend on the time of the year, the numerical force afloat, and particularly the class of men already embarked. The weather should also be closely consulted; and in *winter*-time this officer will never find the progress of "fitting" retarded by too sedulously attending to this particular.

WET WEATHER.—A party of hands may be

profitably employed scraping such decks as afford to the "gang" so engaged shelter from the rain; whilst the holders may be advantageously occupied in completing the ship's stowage. And here it may be not unworthy of remark, that in "first" fitting, the ship cannot be too speedily completed with wood, water, and coals.

FINE WEATHER.—In fine weather, or during the summer season, and particularly when there is no lack of hands, the senior lieutenant should adopt every possible means to ensure an undeviating system in the execution of *divisional labour;* and he should not only be himself impressed with, but impress upon the minds of those delegated to superintend specific duties, the absolute necessity of not permitting a *clash* in the performance of the several services undertaken. If men busily occupied below are to be called upon deck by the beck of an inconsiderate officer, in order that he may complete his minor duties—or if, on the other hand, men engaged in fitting the rigging *aloft* are to be called *below* to assist the movements of the master in the hold,—matters can never go right afloat. It is the duty of the first-lieutenant to confine officers to the performance of their own relative duties.

For "Fitting Rigging," "Pointing Sails," "Stowing Booms," "Trying Spare Spars and Fitted Furniture," "Shipment of Stores," and "Lining and Painting Ship,"—Vide *Boatswain* and *Carpenter*—"*First Commissioning.*"

For "Berthing Hammocks," "Numbering Hammocks and Bags," "Fitting Port-tackle-falls," "Blacking Clues and Lashings," "Fitting Messengers," and "Pointing, Becketing, and Stretching Hawsers,"—Vide *Lower and Main-deck Mates.*

## GUNNER'S DUTIES ASHORE AND AFLOAT.*

THE senior lieutenant will do well to bear in recollection, that in *first* fitting a vessel-of-war, it is always better to be in *advance* than in arrear with those duties connected with the *gunner's* department.—Vide duties assigned to *Gunner.*

## BOATS IN THE BOAT-HOUSE.

THE first-lieutenant is recommended to give an occasional glance at the boats, pending the period they are in the hands of the builder, and particu-

* Vide GUNNER—"Inspection of Gun-geer before leaving the Hulk."

larly before they are consigned to the *painter*. The experienced officer will understand the value of this practical hint.—Vide *Carpenter*, same heading.

## BENDING SAILS.

FORE-AND-AFT SAILS.—In performing this service, it is always desirable to bend first the fore-and-aft sails; to hoist them up, see how they stand, and to notice particularly whether any improvement can be made in the manner of *leading* their several sheets. This precaution is necessary before the ship departs the port; it being often found that the sheave-holes,* diagonally cut in the bulwarks for the insertion of the head-sheets, are placed in positions ill-suited to the standing of the sails. The jibs and stay-sails should be run up-and-down several times, in order that it may be made manifest that their respective halliards and downhauls be fairly led.

SQUARE-SAILS.—In bringing the square-sails to

* The precise position in which the diagonal sheave-holes should be cut for the head-sheets may be easily ascertained by leading the sheets in a line continuous with that which may be drawn from the centre of the luff to the extremity of the clue; or, in other words, that the direction of the sheet passes through the centre of gravity of the sail.

the yards, the top-sails should be always *bent* without landing them in the tops, and sent aloft by "long-tackles,"* fitted for the purpose, at the same time that the courses are hauled out by their respective yard ropes. This method has, of late years, become prevalent in the service; though, indeed, (and with shame be it said,) ships at sea have been recently seen to shift a top-sail after the old John-Hamilton-Moore fashion of "taking up" the top-sail-tye, and sending up the sail abaft all. The custom of *riding down*† the heads of sails is one which no practical seaman will ever sanction.

When the top-sails and courses are bent, and their respective geer properly rove, the former should be sheeted home and hoisted to the mast-head with all their reefs out. The top-gallant sails and royals should be set at the same time, and the geer of the courses overhauled down. The sails should be clued up, and set three or four times, in order to ascertain that every rope be clearly *rove*,

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* Vide MATE-OF-THE-LOWER-DECK—"Making-up Sails."

† The author of "The Naval Officer's Guide" recommends this method of "stretching the head of the sail." Why the roping of a sail is to be stretched in opposition to the stitching of the seams of the canvas, has puzzled sea-faring folk. The practice is very properly fading out of fashion.

and fairly *led* before they be finally furled. On the following day, it is recommended to bend the studding-sails, and, if the weather and wind permit, to hoist them up, and see how they severally stand.

## SHIFTING FROM THE HULK TO THE SHIP.

THE duties incidental to this occasion are severally assigned to those officers whose superintendence become indispensable to ensure order and regularity. The senior lieutenant should bear in mind that he will be held responsible for the cleanly condition of the hulk, and that he will not cause a report to be forwarded to the superintendent of the dock-yard until the vessel be thoroughly cleaned and rendered fit for the reception of another crew.

## WATCH-BILL, ON THE PRINCIPLE OF PARTNERS.

THE preliminary step in forming a watch-bill is, to make an exact estimate of the *actual* working hands in each watch. To ascertain this, it will be necessary to deduct the officers, idlers, boys, and marines from the full complement allowed to the ship. By reference to the formula, given by way of example,

at the close of this chapter, it will be be seen that there are thirty-four officers, fifty marines, twenty-nine idlers, and fifteen boys, which, together, will give one hundred and twenty-eight. Subtract this number from the complement, three hundred, and one hundred and seventy-two blue jackets remain, as *bonâ fide* working hands, to watch. Should it be desirable to add any number of boys to the department of the mizen-top, the required number should be "*lent*" from the list of boys, but should not appear in the watch-bill.

At one glance of this scheme, the senior lieutenant will see the number of working men to watch.*

In forming the watch-bill, it is recommended to pursue that principle which, in this work, comes under the designation of PARTNERS,—that is, every name and number *opposite* to each other in the watch-bill, is made answerable for the stations and duties of each. For example, No. 1, the captain of the forecastle of the starboard watch, is to be

* It may here be necessary to observe, that a quarter-master or a boatswain's mate may appear more than is allowed by the Admiralty complement, and that the rating of the captain's coxswain, and coxswain of the launch, may be given to the two petty officers who perform these duties.

made acquainted with *all* the stations and duties of No. 2, in the larboard watch, and so on throughout the watch-bill.

In granting leave on shore, or in despatching a party from the ship to execute any particular duty, *partners* should *never* be permitted to go *together;* and, if an equal number of men out of *each* watch be selected for the performance of any specific service, numbers *opposite* to each other in the watch-bill are not to be "pricked off." By this arrangement, a partner is always kept on board to perform the public as well as the private duties of the *absent* man.

## QUARTERING SHIP'S COMPANY.

In quartering the ship's company, the senior lieutenant should be fully aware of the necessity of distributing the men on the different decks as nearly as possible in the vicinity of that part of the vessel in which they perform their *general* duties. The forecastle and fore-top men should be quartered forward; the main, mizen-top men, and after-guard, abaft; and the *artificers* should be equally distributed in positions of the ship where the services of mechanics may probably be called into sudden requisition; such, for example, as

carpenters and armourers. One or two carpenters should be quartered in close contiguity with the pumps, and a shipwright stationed to the "gun and opposite," and nearest to the rudder-head, with tools and materials ready to meet accident or repair damage done to the tiller. Care should be taken, that both the quarter-master at the con, and the men stationed at the wheel,* be sharp of sight and quick of hearing. The top-men stationed aloft are required to be steady and active men, and the riggers should be selected from the best seamen, and "leading men" of the ship.

In forming the quarter-bill, the senior lieutenant will be required to observe a due balance with respect to the *two* watches; that is, the crew of each gun and its opposite, are to consist of equal numbers of men from both watches. The first captain, and half the crew of each gun, designated by the odd numbers, are to belong to the starboard watch; and the second captain, and the remaining half of the complement are to pertain to the larboard watch.†

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* Captain Griffiths recommends tall men at the wheel.

† When an odd number of men are stationed as the crew of a gun, such as nine, eleven, or thirteen, the odd man should be alternately of the larboard and starboard watch.

## STATIONING SHIP'S COMPANY.

UPON this subject a diversity of opinion appears to exist, and that, too, with some of the most intelligent and experienced officers in the service. To determine upon which side the balance of authority preponderates, would, at this moment, be a question of difficult solution. The supporters of this system are loud in favour of "*individual* stationing;" whilst opponents of the practice assert, that considerable mischief constantly ensues by officers confiding too implicitly in what they term "the *certainty* of men being *always* found at their respective posts;" and, that supporters of such system do not make sufficient allowance for *casualties*, or anticipate sudden accidents occurring when people are proceeding hastily to their assigned stations. Those who disregard "individual stationing," contend, that captains are more likely to look for the *certain* execution of a specific service to the officers superintending different duties, than to trust to the fore-mast man, who *may* be missing; and that the lieutenants and petty officers are, on all occasions, more on the *alert* when left to the exercise of their own judgment.

The latter reasoning carries weight; but it must be admitted, that if stationing the fore-mast men in the execution of evolutionary duties be founded on that principle which has been already designated the *principle* of *partners*, and the basis of the system of stationing is made to *depend* upon the watch *on deck*, accident will seldom or never occur.

By the principle of *partners*, the people should be so stationed in the execution of specific movements, that the men who are appointed to "stand by ropes" when working with the *watch*, should also be directed to run to the *same* station when the "*hands* are called" to perform the same service. For example — in "*going about*," the captain of the forecastle of the watch upon deck attends the "fore-tack and head bow-lines." The captain of the forecastle of the watch below proceeds to the same ropes, in order to satisfy himself that the man belonging to the watch on deck is already in his station. If he be *not* at his post, the man belonging to the watch below occupies his place; but should the captain of the forecastle of the watch on *deck* be seen in his station, his partner will proceed to assist in other duties assigned to him in the station-bill; and every partner

should become responsible that the services assigned to *both* men be performed by *one* or the *other*.*

## STATIONING SHIP'S COMPANY IN THE EVENT OF FIRE.

Upon the sudden alarm of fire afloat, nothing will more effectually contribute to preserve silence, prevent confusion, and avert panic, than a judicious distribution of duties, which will call into simultaneous action the aid of every officer, seaman, marine, and boy borne on the books of the ship.

* By adopting the system of partners, the first-lieutenant will save himself a world of trouble. When men are absent from the ship, or "away in boats," the customary cry is, "Send John Millar's messmates up to take his hammock down." John Millar may have six or seven messmates, and each messmate, in endeavouring to evade the task, may say, "*I* took it down the last time,"—though the "*last time*" is never made to appear. But were partners not only to be made answerable for each other's hammocks, but also for every other routine of service connected with their several stations in the ship, and were this based upon the principle of each being answerable for the public and private duties of the other, things would always work well afloat. A man becomes sick, his partner not only attends to his hammock, but washes his clothes. Again, another solicits leave on shore, but permission is not granted until he reports on the quarter-deck his partner on board, ready to fulfil his duties during his absence. It will be seen, that by pursuing the system of partners, the hammocks of absent men are readily hung upon the lower deck. For example, Nos. 4 and 5 of the forecastle are berthed next to each other in the same longer: how much easier is it then for 4 to hang up the hammock of 5, than for the messmate of 5, whose No. may be 122, to perform this task upon the *opposite side and different extremity* of the ship?

By such pre-ordained arrangement, *presence of mind* in all parties will be ensured. This, it cannot be disputed, is the most valuable attribute which men, on the sudden discovery of danger, can possibly possess. Fire on board ship is one of the most bewildering casualties to which human beings are subject; but to allay the terror consequent upon the *first* announcement of the calamity, nothing can be so effectual as a knowledge, not only that measures to meet the evil are already systematized, but that every man, having a specific duty to perform, is less at leisure to give way to apprehension.

The propriety of "beating to quarters" upon the sudden alarm of fire may be disputed; and certainly there are objections to the adoption of this prevalent practice. In the first place, the ship's company are often called to quarters to perform duties totally unconnected with that which the *sound* of the summons would convey. In the next, though a portion of the crew may be apprised of the cause which calls for a general muster of the men, yet, the *majority* of the ship's company may be quite unacquainted with the casualty which produces the general movement; and the very questions and

answers interchanged on this occasion create confusion and excite alarm. Again, admitting that the men assemble quietly at quarters, considerable delay ensues by the *double* operation of *first* mustering the people, and *then* dispatching detached parties to collect those implements necessary to extinguish the fire,—to say nothing of the immense advantage which *provisional* service ever possesses over *discretionary* duties.

If a specific duty be assigned to every individual borne on the books, the moment the alarm of the fire be given, (and the alarm should be conveyed, instanter, through the medium of a rapid and a peculiarly-marked movement of the bell,) every soul on board has then only to repair to his assigned station; and those whose duty it is to provide appropriate implements, will procure them, and proceed forthwith to their respective posts, without awaiting the orders of officers.

The FIRE-BILL should be so formed, and each man so stationed, as to meet contingencies incidental to fire afloat, whether happening in harbour or occurring at sea. For example, a ship moored in a crowded anchorage may have to slip her cables, to avoid endangering others. Under such circumstances,

if the ship be secured by chain-cables, the armourer and his mates, under the direction of a commissioned officer, should provide tools to unshackle the cable or cables at the desired length. Again, if the ship be at sea, on the discovery of fire breaking out below, to extinguish it promptly, much will depend on the locality of the fire, the sail that is set, and whether the ship be close hauled or sailing large. But the first consideration should be to ascertain promptly the precise *position* of the fire; and this duty should be entrusted to the first-lieutenant, at the head of a party of petty officers and leading men, to be designated *Fire Searchers.*

A particular party, under the direction of the surgeon and his assistants, should proceed to the sick berth, to superintend the removal of patients who may be lame or confined to their hammocks; as also to be in readiness to destroy, if required, all inflammable fluids or medical stores susceptible of ignition.*

* An experienced officer will assign to the marines duties incidental to the occasion. The practice of directing this portion of the ship's company to fall in under arms is not one which here can be advocated. It is a libel on the seamen of the service to suppose that the marines are the only people serving in a vessel of war who, in time of danger, can command themselves sufficiently to deter the timid and enforce order.

# FIFTH-RATE'S PLAN OF WATCH-BILL,

ON THE PRINCIPLE OF PARTNERS—COMPLEMENT 300 MEN.

UNDER the heads of "Watching the Ship's Company," and forming the "Watch Bill," notice has already been taken of this subject; but to explain the principle of *partners*, and to simplify the plan, the senior lieutenant will first proceed to note the number of Officers, Marines, Boys, and Idlers allowed to the ship* after the following form :—

| OFFICERS. | BOYS. |
|---|---|
| 1 Captain. | 5 second class. |
| 4 Lieutenants. | 10 third class. |
| 1 Master. | 15 |
| 1 Second Master. | |
| 1 Chaplain. | |
| 1 Surgeon. | |
| 1 Purser. | |
| 1 Boatswain. | |
| 1 Gunner. | |
| 1 Carpenter. | |
| 1 Cook. | |
| 2 Master's Mates. | |
| 8 Midshipmen. | |
| 1 Assistant Surgeon. | |
| 1 Captain's Clerk. | |
| 1 Schoolmaster. | |
| 4 Volunteers. | |
| 3 | |
| 34 | |

| MARINES. | IDLERS. |
|---|---|
| 2 Lieutenants. | 1 Master-at-arms. |
| 2 Serjeants. | 1 Armourer. |
| 1 Corporal. | 1 Caulker. |
| 1 Drummer. | 1 Ship's Corporal. |
| 44 Privates. | 2 Carpenter's Mates. |
| 50 | 1 Captain-of-the-hold. |
| | 1 Armourer's Mate. |
| | 8 Carpenter's Crew. |
| | 1 Boatswain's Yeoman. |
| | 1 Gunner's ditto. |
| | 1 Carpenter's ditto. |
| | 1 Cook's Mate. |
| | 1 Purser's Steward. |
| | 1 Gun-room Steward. |
| | 1 Ward-room Cook. |
| | 1 Captain's Steward. |
| | 1 Captain's Cook. |
| | 1 Ship's Cook. |
| | 1 Loblolly Boy. |
| | 1 Sail-maker. |
| | 1 Purser's Steward's Assistant. |
| | 29 |

* In selecting crews for the boats, attention is directed that no department of the ship be weakened by an *unequal* distribution of hands.—Vide *formula*.

The total number of the Officers, Marines, Boys, and Idlers, it will be seen, is 128;

From the complement..... 300
Subtract..... 128

Leaving..... 172 men to watch, as in the formula annexed.

N. B.—The names inserted in the following Table are intended to demonstrate the principle of partners. Francis Fish is the *partner* of Henry Hawse. Neither of these men belong to boats; but as William Waters belongs to the barge, his partner, Thomas Tack, cannot, in accordance with this system, be stationed to a boat. Should, however, it become necessary to relieve the *standing* boats'-crews, whether upon the occasion of *watering* the ship, or performing duties that will admit of no interruption or delay in time, the senior lieutenant has only to direct the *opposite* numbers to take the places of their partners. The first-lieutenant should always appoint in both watches an even proportion of hands, to be designated "*extra men*," and to be named to every boat in the ship, in the event of casualties or sickness. For example, suppose No. 31, belonging to the barge, becomes sick, he will appoint an "extra man" from another department of the vessel, in order that the labour on board may not fall too heavily on the fore-top men. He will therefore nominate 109 from the department of the after-guard, to become one of the "extra men" belonging to the barge. Again, suppose 46 of the first cutter happens to leave his boat, and is left behind when doing duty on shore, then 92, "extra men" of the mizen-top, takes the place of 46 till the straggler returns.

If, however, the complement of men allowed to the ship will not admit of providing a sufficient number of "extra men" for all the boats, without infringing upon the principle of partners, the senior lieutenant must be guided by circumstances, and fill up vacancies accordingly. The barge and launch may be both on the booms; and as the services of each are not likely to be called into requisition, a man from the launch may supply the place of the sick man belonging to the second cutter; or a man from the barge may occupy the temporary place of the missing straggler. Few ships, on the war establishment, are without sufficient hands to admit of the principle of apportioning "*extra hands*" to the boats.

# WATCH-BILL OF A FIFTH-RATE.

## FORECASTLE-MEN.

### FIRST PART.

| Rating. | Quarters. | Boat. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| Cap. F.C. | Rig. F.C. | | Francis Fish. | 1 | 2 | Henry Hawse. | Cap. F.C. | Rig. F.C. | |
| | | Launch | | 3 | 4 | | | | |
| | | | | 5 | 6 | | | | Launch |
| | | Barge | | 7 | 8 | | | | |
| | | | | 9 | 10 | | | | Barge |
| | | | | 11 | 12 | | | | |

### SECOND PART.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A.B. | 1stGun,FC | | Thomas Tack. | 13 | 14 | William Waters. | | | Barge |
| | | Pinnace | | 15 | 16 | | | | |
| | | | | 17 | 18 | | | | Pinnace |
| | | 2nd Cutter | | 19 | 20 | | | | |
| | | | | 21 | 22 | | | | Gig |
| | | Gig | | 23 | 24 | | | | |

# FORE-TOP-MEN.

## FIRST PART.

| Rating. | Quarters. | Boat. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| Cap. F.T. | F.T. | | Thomas Earring. | 25 | 26 | Benjamin Bunter. | Cap. F.T. | 1 Gun, MD | |
| | | Launch | | 27 | 28 | | | | |
| | | | | 29 | 30 | | | | Launch |
| | | Barge | | 31 | 32 | | | | |
| | | | | 33 | 34 | | | | Barge |
| | | Barge | | 35 | 36 | | | | |
| | | | | 37 | 38 | | | | Barge |

## SECOND PART.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Pinnace | | 39 | 40 | | | | |
| | | | | 41 | 42 | | | | |
| | | 1st Cutter | | 43 | 44 | | | | |
| | | | | 45 | 46 | | | | 1st Cutter |
| | | 2nd Cutter | | 47 | 48 | | | | |
| | | | | 49 | 50 | | | | Gig |

# MAIN-TOP-MEN.

## FIRST PART.

| Rating. | Quarters. | Boat. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| Cap. M.T. | M.T. | | Richard Roarer. | 51 | 52 | Benjamin Bellow. | Cap. M.T. | Rig. Q.D. | |
| | | Launch | | 53 | 54 | | | | |
| | | | | 55 | 56 | | | | Launch |
| | | Barge | | 57 | 58 | | | | |
| | | | | 59 | 60 | | | | Barge |
| | | Barge | | 61 | 62 | | | | |
| | | | | 63 | 64 | | | | Barge |
| | | | SECOND PART. | | | | | | |
| | | Pinnace | | 65 | 66 | | | | |
| | | | | 67 | 68 | | | | Pinnace |
| | | 1st Cutter | | 69 | 70 | | | | |
| | | | | 71 | 72 | | | | 2nd Cutter |
| | | 2nd Cutter | | 73 | 74 | | | | |
| | | | | 75 | 76 | | | | 2nd Cutter |
| | | Gig | | 77 | 78 | | | | |
| | | | | 79 | 80 | | | | Jolly |

## MIZEN-TOP-MEN.

### FIRST PART.

| Rating. | Quarters. | Boat. | | No. | No. | | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| A. B. | Miz. Top | | Charles Cistern. | 81 | 82 | Peter Peak. | A. B. | Rig. Qr. D. | |
| | | | | 83 | 84 | | | | |
| | | Jolly | | 85 | 86 | | | | |
| | | | | 87 | 88 | | | | Jolly |

### SECOND PART.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 89 | 90 | | | | |
| | | | | 91 | 92 | Extra man. | | | 1st Cutter |
| | | 2nd Cutter | | 93 | 94 | | | | |

## AFTER-GUARD.

### FIRST PART.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Cap. Af. Gd. | Rig. Qr. D. | | Samuel Scraper. | 95 | 96 | Henry Bucket. | A. B. | 1 Gun, Q. D. | |
| | | Launch | | 97 | 98 | | | | |
| | | | | 99 | 100 | | | | Launch |
| | | Launch | | 101 | 102 | | | | |
| | | | | 103 | 104 | | | | Launch |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Pinnace | | 105 | 106 | | |
| | | | | 107 | 108 | | Pinnace |
| | | | Extra man, Barge. | 109 | 110 | | |
| | | 1st Cutter | | 111 | 112 | | |
| | | | | 113 | 114 | | 1st Cutter |
| | | Pinnace | | 115 | 116 | | |
| | | | | 117 | 118 | | Pinnace |
| | | Pinnace | | 119 | 120 | | |

SECOND PART.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | 121 | 122 | | 2nd Cutter |
| | | 1st Cutter | | 123 | 124 | | |
| | | | | 125 | 126 | | Gig |
| | | 2nd Cutter | | 127 | 128 | | |
| | | | | 129 | 130 | | 2nd Cutter |
| | | 2ndCutter | | 131 | 132 | | |
| | | Jolly | | 133 | 134 | | |
| | | | | 135 | 136 | | Jolly |
| | | | | 137 | 138 | | |
| | | Jolly | | 139 | 140 | | |
| | | | | 141 | 142 | | Jolly |

## WAISTERS.

### FIRST PART.

| Rating. | Quarters. | Boat. | | No. | No. | | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| Cap. Mast | 7 Gun, M D. | | Henry Hatch. | 143 | 144 | Peter Puncheon. | Cap. Mast. | 8 Gun, M D. | |
| | | | | 145 | 146 | | | | |
| | | | SECOND PART. | | | | | | |
| | | Launch | | 147 | 148 | | | | |
| | | Jolly | | 149 | 150 | | | | Launch |

## GUNNERS.

### FIRST PART.

| Gunr. Mate | Magazine | | Matthew Match. | 151 | 152 | Thomas Tompkin. | Gunr. Mate | Rig. Qr. D. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Launch | | 153 | 154 | | | | |
| | | | | 155 | 156 | | | | 1st Cutter |
| | | | SECOND PART. | | | | | | |
| | | | | 157 | 158 | | | | Launch |
| | | 1st Cutter | | 159 | 160 | | | | |
| | | | | 161 | 162 | | | | Pinnace |

## BOATSWAIN'S MATES.

### FIRST PART.

| Rating. | Quarters. | Boat. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. | Boat. |
|---|---|---|---|---|---|---|---|---|---|
| Bsn. Mate | Cap. Rig. Qr. D. | | Charles Call. | 163 | 164 | Peter Pipes. | Bsn. Mate | 7 Gun, M D. | |
| | | | SECOND PART. | | | | | | |
| Cox. Lnch. | 3 Gun, M D. | | | 165 | 166 | | Cox. Pinn. | After Gun, Qr. D. | |





## QUARTER-MASTERS.

### FIRST WATCH.

| Qr. Mastr. | Con or Wheel | Cox. Barge | Thomas Tiller. | 167 | 168 | William Wheeler. | Qr. Mastr. | Wheel | |
|---|---|---|---|---|---|---|---|---|---|
| | | | SECOND WATCH. | | | | | | |
| Qr. Mastr. | Cap. 2nd Gun, Q.D. | | | 169 | 170 | | Qr. Mastr. | 4 Gun, Q D. | Cox. Pinn. |
| | | | THIRD WATCH. | | | | | | |
| Qr. Mastr. | 18th Gun, M. D. | | | 171 | 172 | | Capt. Coxs. | | Gig |

# IDLERS.

## FIRST PART.

| Rating. | Quarters. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. |
|---|---|---|---|---|---|---|---|
| Master-at-arms | Magazine | Master-at-Arms | 173 | 174 | Ship's Corporal | Ship's Corp. | Fore Cockpit |
| Armourer | 4th Gun, M. D. | Armourer | 175 | 176 | Armourer's Mate | Arm. Mate | Aft G., M. D. |
| Sail-maker | 6th Gun, M. D. | Sail-maker | 177 | 178 | Caulker | Caulker | Wings |
| Carpent. Mate | Wings | Carpenter's Mate | 179 | 180 | Carpenter's Mate | | 8th Gun, M. D. |
| Carpent. Crew | Wings | Carpenter's Crew | 181 | 182 | Carpenter's Crew | Carp. Crew | Wings |
| Ditto | 7th Gun, M. D. | Ditto | 183 | 184 | Ditto | Ditto | Aft G., M. D. |

## SECOND PART.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Carpent. Crew | 2d Gun, M. D. | Carpenter's Crew | 185 | 186 | Carpenter's Crew | Carp. Crew | 7th Gun, M. D. |
| Ditto | 3d Gun, M. D. | Ditto | 187 | 188 | Ditto | Ditto | 10 Gun, M. D. |
| Capt. Hold | Wings | Captain-of-the-Hold | 189 | 190 | Boatswain's Yeoman | Yeo. Store-r. | Fore Cockpit |
| | Fore Cockpit | Gunner's Yeoman | 191 | 192 | Carpenter's Yeoman | | Ditto |
| Capt. Steward | Aft Gun, M. D. | Captain's Steward | 193 | 194 | Gun-room Steward | G. R. Steward | Aft Cockpit |
| Purs. Steward | Aft Cockpit | Purser's Steward | 195 | 196 | Purser's Steward's Assist. | Ordinary | Ditto |
| Captain's Cook | 2d Gun, M. D. | Captain's Cook | 197 | 198 | Ward-room Cook | W. R. Cook | 2d Gun, M. D. |
| Ship's Cook | Magazine | Ship's Cook | 199 | 200 | Cook's Mate | Ordinary | Ditto |
| Ordinary | Attendant Surg. | Loblolly Boy | 201 | | | | |

# BOYS.

## FIRST PART.

| Rating. | Quarters. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. |
|---|---|---|---|---|---|---|---|
| | | | | 202 | Simon Steady, 1 Lieut. B. | Boy, 2d Class | Pow. B., Q. D. |
| Second Class | Pow. B. aft M. D. | Boy, 2nd Lieutenant's..... | 203 | 204 | Boy, 3rd Lieutenant's..... | Ditto | Do. Fore M. D. |
| Ditto | Do. Forecastle | Do. 4th Lieutenant's..... | 205 | 206 | Do. Master's..... | Ditto | Do. Q. Deck |
| Ditto | Do. M. D. | Do. Purser's..... | 207 | 208 | Do. Surgeon's..... | Ditto | Attend. Surg. |

## SECOND PART.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ditto | Do. M. D. | Boy, Chaplain's..... | 209 | 210 | Boy, Gunner's..... | Boy, 2d Class | F. Gun, M. D. |
| Ditto | Do. Forecastle | Do. Boatswain's..... | 211 | 212 | Do. Carpenter's ..... | Ditto | Wings |
| Ditto | Do. aft G. M. D. | Do. Captain's..... | 213 | 214 | Do. Lent to Miz.-top L. W. | Ditto | F. M. D. |
| Ditto | Do. do. | Do. Midshipmen's..... | 215 | 216 | Do. Midshipmen's..... | Ditto | Aft M. D. |

# MARINES.

## FIRST PART.

| Rating. | Quarters. | Centinels. | Starboard. | No. | No. | Larboard. | Rating. | Quarters. | Centinels. |
|---|---|---|---|---|---|---|---|---|---|
| Serjeant | Quarter-deck | | Serjeant | 217 | 218 | Serjeant | Serjeant | Forecastle | |
| Private | 1st G. F. C. | Forecastle | Private | 219 | 220 | Private | | 1st G. Q. D. | |
| | 2d G. Q. D. | | | 221 | 222 | | Private | 3d G. Q. D. | Cabin Door |
| | 4th G. Q. D. | Cabin Door | | 223 | 224 | | | 5th G. Q. D. | |
| | 6th G. Q. D. | | | 225 | 226 | | | 1st G. F. C. | |
| | 2d G. F. C. | Gangway | | 227 | 228 | | | 6th G. Q. D. | |
| | 4th G. Q. D. | | | 229 | 230 | | | 3d G. Q. D. | Gangway |
| | 2d G. F. C. | Cabin Door | | 231 | 232 | | | | |
| | | F. H. Mag. | | 233 | 234 | | | | |
| | | | | 235 | 236 | | | | Gangway |
| | | Gun-room D. | | 237 | 238 | | | | |
| | | Officers' Ser. | | 239 | 240 | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Corporal | Quarter-deck | | Corporal | 241 | 242 | Lance Corporal | | | |
| Private | | Gangway | Private | 243 | 244 | Private | | | |
| | | | | 245 | 246 | | | | Gangway |
| | | Forecastle | | 247 | 248 | | | | |
| | | | | 249 | 250 | | | | F. Hat. Mag. |
| | | Gun-room D. | | 251 | 252 | | | | |
| | | | | 253 | 254 | | | | Gun-room D. |
| | | F. H. Mag. | | 255 | 256 | | | | |
| | | | | 257 | 258 | | | | |
| | | | | 259 | 260 | | | | Gangway |
| | | F. H. Mag. | | 261 | 262 | | | | |
| | | | | 263 | 264 | | | | Officers' Ser. |

* The column devoted to quarters is only partially filled up. A sufficient number to demonstrate the plan of quartering the marines is given: it being always desirable to distribute the party to the guns equally on the quarter-deck and forecastle. The column headed "Centinels" will shew the number of *working* hands of which the watch is deprived. Those centinels, however, who are posted on the gangways and forecastle in harbour will, when at sea, do their duty as regular working hands in their respective watches. By the above plan it will be also seen that no *two centinels* appear as partners.

# IN PORT.

## FITTING.

In opening this chapter, it may be necessary to observe that the port duties will as much depend upon the locality of the port as upon the state and condition of the ship, and the extent of repair and fitting the vessel may require. The prompt and orderly execution of duties will entirely depend upon the *pre-arrangements* of the commanding officer. He should studiously consult dock-yard hours, weather, *time*, and *tide*.

## RUNNING IN AND OUT LOWER-DECK GUNS.

The senior lieutenant is recommended to consult the surgeon upon the propriety of keeping the

ports open, and the guns out, during winter weather.

## BOATS.—DUTIES OF CREWS.*

NOTHING sooner indicates the order and discipline of a vessel-of-war than the cleanly condition and efficient state of the boats, together with the personal appearance of their crews. In this particular, sufficient attention is not always observed in the service. In well-regulated ships the coxswains are compelled to report to the senior lieutenant the state of their respective boats, and in the morning to ascertain, from the commanding officer, the manner he may require the people to be dressed for the day.

## BOATS.—OFFICERS.

NOTHING more strongly indicates an unaccommodating disposition on the part of the senior lieutenant, than the unsightly appearance of three or four officers, seated in a shore-boat, shoving off from the side of a vessel-of-war. Of this *accommodating* spirit some lieutenants, singular to say, are parti-

* All boat-duties incidental to a ship in port will be found in a chapter addressed to the "Midshipman," to which the first-lieutenant is immediately referred.

cularly proud, and are often delighted at the opportunity it affords them to prove their power, or rather, to manifest their will. This is littleness indeed, and a petty exemplification of "brief authority." *

## LEAVE TO THE SHIP'S COMPANY.

WHEN it becomes an imperative duty on the part of the commanding officer to refuse leave to applicants, or, as it is termed by the fore-mast men, "*liberty* on shore," he should always endeavour to assign a satisfactory reason for non-compliance. It sometimes happens that officers refuse permission to the men in a manner which leaves the applicant to *suspect* that the refusal proceeds more from caprice,

* It is true that inconsiderate officers, and those who come under the denomination of "idlers," do not always make sufficient allowance for the varieties of duty which the senior lieutenant may be required to execute during the day, and that the period which may suit the "idler" to dissipate tedium may neither suit the convenience of the service, nor the *troublesome time* of the first-lieutenant. To prevent mistake, misunderstanding, imputations of caprice, or either party being disappointed of anticipated *pleasure*, it should be an invariable rule in all vessels-of-war, that a boat, at stated periods of the day, when the public service will admit of it, be placed at the disposal of officers, for the purpose of conveying them to and from the shore. Such regulations will save the first-lieutenant a world of trouble, and possibly *prevent* a war of words.

or individual dislike, than from any rational cause connected with impending duties.* No men are more easily satisfied than seamen, particularly when the *reason* of an abridgement of their privileges is made manifest. It is true, that there are subjects in the service that must be treated with apparent harshness; but such characters, upon applying for leave to visit the shore or other vessels-of-war, should be distinctly told, in a tone devoid of all prejudice or passion, that the refusal is a penalty consequent upon "bad behaviour," and that as soon as amendment appears in the applicant's conduct, so soon will he meet with the same indulgence which is granted to others.

A remedy for "*leave-breaking*" has long been successfully tried, with beneficial effects, both to the seamen and to the service. It is simply this:—A man solicits leave on shore—the commanding

* Many officers, when fitting in port, are *particularly economical* in the dispensation of leave, and limit the "liberty" to a period which invariably causes a *liberty* to be taken with the *leave*; and adduce this as a reason for curtailing "of its fair proportions" that time of rest and recreation so ardently looked for on return from sea by the seamen of the service. It is an indisputable fact, that in fitting ships, even "with all possible despatch," those officers who have allowed to their crews the longest leave, have always had the satisfaction of finding their vessels the *first* equipped, and their complement soonest complete.

officer inquires the period he desires permission to be absent from the ship; the applicant answers, "Eighteen hours." "Perhaps you would like twenty-four," returns the lieutenant, — "if you promise to return to the ship at that period, your leave is granted; but for every hour you break *over* your limited time, you will pay the penalty of a week's confinement on board,—that is, if you return to the ship *six* hours after your leave has expired, you must not look for a renewal of leave for *six* weeks."

That this remedy* should operate effectually, the senior lieutenant will be required to keep a "case book," after the formula given in the opposite page, and he must conform strictly to the conditions stipulated in the bond. When the fore-mast man perceives that the conditions are only broken on his part, and that the commanding officer rigidly "stands upon his bond," there will be few *liberties* taken with *leave*.

* Vide article under the head of "Preservation of Silence."

## FORMULA FOR "LIBERTY MEN."

| Men's Names. | Number on the Ship's Books. | Department of Ship. | Extent of Leave. | Date Quitted. | Date Returned. | Remarks. |
|---|---|---|---|---|---|---|
| John Sutton... | 42 | Fore-top Starb. Watch. | Twenty-four hours. | 1st of May, 6 P. M. | 3d of May, 8 A. M. | Leave broken fourteen hours. Fourteen weeks before renewal of leave can be granted. |
| Richard Jones | 4 | Cap. Forec. Larb. Watch. | Twenty-four hours. | 1st of May, 6 P. M. | 2d of May, 6 P. M. | Returned at expiration of leave. |

## WOMEN ALONGSIDE THE SHIP.

"FEW things," says a professional writer,* "are more teasing to the men than to have their wives &c. plying off on their oars, as they are sometimes kept even for a considerable time,"—at periods, too, when the rain, together with the spray of the sea, has caused them much of personal inconvenience by wetting their habiliments. "Independently of the distress thus occasioned to them, these ladies should not, even on the score of policy, be unnecessarily annoyed; their *influence* over the men is well known,† and it does not appear to be judicious to

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* Captain Griffiths.

† The author of this work has to record a curious colloquy which took place on board His Majesty's ship C——, in Plymouth Sound, during the early part of the year 1825.

A "lady" who had been kept "lying off on her oars" longer than was deemed consistent with Chesterfieldian notions of etiquette, thus broke out as soon as she ascended the vessel's side, and was fairly out of ear-shot of the first-lieutenant:—

"Curse the ship, and the fellor who do'sn't know how to treat a woman *like* a woman! It took me, ay, more nor five shillings—and no easy matter it was, too, to raise the same—to redeem it; look at it! (holding up the tail of her gown, dripping wet,) look at it! —it's not even fit now to convart into a common swab! *He* call himself a man!—no, there's never a bit o' man's blood in his unhuman carcass!"

"Never mind, Bet; give us the pattens, and bundle below to the berth."

"Bundle below, indeed! I tell you what 'tis, Mister Bill, you're never a bit *better* yourself. D'y' think as Tom Williams

stimulate an exertion of such influence. Although there are times when duty may render it improper to admit women at the moment, yet in general that is not the case; and if it be necessary to refuse them admission, it is better to tell them to come at a given hour, than to keep them hanging on. Waterage is a heavy expense to the parties, and it must be augmented by these delays of getting on board."*

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there 'oud stand it?—not he; he's too much of a man to see his wife moll-treated in any way. But *you*—ye hasn't the heart of a man!"

"Go below quietly, old girl,—bundle below. I say, Bet, where ha' ye got the bladder?—mum—mind the master-'t-arms."

"Ay! that's all the likes as such fellors as you think on. Look at my gownd—look at my bonnet,—but y'er a chicken-hearted fellor, or you'd go aft and 'monstrate to the fellor's face. And, moreover, if you'd the smallest liking or regard for a woman, you'd take the first hopportoonity to bolt from the beggarly ship."

"So I woo'd, Bet; but ye see I've a matter of *seven* years' *survitude* to look to."

It is needless to add, that the lady's eloquence fled with her flight below.

* These remarks are well founded. The author would find it no difficult matter to have them corroborated by living testimonies, collected from the vicinity of "*Castlerag*," or the neighbourhood of "*Point*." But, to prevent inconvenience to the "sex," as well as to the service, commanding-officers who are disposed to be *accommodating*, or, as it is sometimes termed by the "ladies," to be "*good-natured*," establish certain days for the ingress and egress of the female community afloat. Tuesdays and Saturdays are generally devoted to this purpose; and some officers so far indulge in gallant feelings as to allow a ship's boat to land the "ladies."

# AT SEA.

## ARTIFICERS.—RETURN OF DAILY WORK.

THE warrant officers have been already directed, not only to return to the senior lieutenant "Reports" of artificers' work performed during the twenty-four hours, but also to lay before him a plan of such operations as may be designed for the ensuing day.*

It is a practice too prevalent in the service, to assign to the watch below the execution of duties

* This system will prevent much mistake. Nothing carries with it more of disorderly sound, than the voice of the first-lieutenant *roaring*, in a tone of interrogation, "What's *that* the carpenters are sawing up *now?*" or, "What are the sail-makers *at?* *I* never ordered *that* sail up for repair—bundle it below again." Noisy interrogations of this nature frequently assail the *ears* of the *captain* in the cabin.

which might be as readily performed by the people composing the watch upon deck. The custom of assigning duties to those who have had hardly time to recover from the harassing effects which have been produced by bodily labour upon deck, is manifestly founded in error. From such system, more of evil than of good is likely to result.*

## EXERCISING GREAT GUNS.

It has long been the custom of the service to exercise a certain portion of the ship's company at quarters. This is a most proper and desirable system to pursue, so long as the men composing the division to be exercised, pertain not to the watch *below*. After the fatigue of the morning watch, and particularly the labour of cleaning the lower-deck, to be called away from their little leisure, to exercise the great guns, is to the fore-mast men a source of *annoyance*, of which few officers are altogether aware. By the proposed plan, the watch *below* are never disturbed, and all the deck-duties incidental to a ship at sea are executed by the watch

* When officers are in doubt as to the cause of desertions, the simple interrogation of "do you work the watch *below*?" may do much towards the solution of a matter often involved in mystery.

at quarters. This can be readily accomplished, particularly as the official instructions direct that "the crew of each gun and its opposite, are to consist of equal numbers of men from both watches."

Suppose, for example, the larboard watch be the watch upon deck, and that it be required to exercise *one part* of the main-deck quarters,—the senior lieutenant should not call the first part of the main-deck quarters, because that division is composed from the starboard watch, and the starboard watch is then the watch *below*. He will therefore direct the second part of the main-deck quarters to fall in on the larboard side of that deck; and the officer commanding the division to be exercised, will select the seven foremost or seven aftermost guns on the same side, so as to allow to each gun its full complement of men. If it be required to shorten sail, to haul the jib down, or the main-sail up, the sail-trimmers of the main-deck quarters, in addition to the remaining portion of the watch unoccupied at the guns, can be always called to execute such service. Whereas, by the usual method of exercise adopted in the service, disputes constantly arise between the officer-of-the-watch and the officer superintending the division at quarters. The officer

superintending the exercise at the guns complains, that the moment he commences a movement with his men, they are called away by the lieutenant in charge of the deck, to "brail up the driver," or "brace up the main-yard," and, during that time, the seamen-of-the-watch below growl and grumble, that they have to "work double tides" at the side-tackles, &c., pending the absence of those people who have been called away to trim sails or execute other evolutions.

A clear-sighted officer, not wedded to antiquated notions, and who can appreciate the value of system, will at once see the propriety of pursuing a practice which must give universal satisfaction afloat.

## EVENING QUARTERS.

THIS service is too often regarded in the light of a mere matter of muster. The first-lieutenant should exact, from all officers who become accountable, that the gun-geer and implements under their charge respectively, be in *reality* ready for immediate use; and not merely to be *reported* as such. He will do well to refer to those articles addressed to the warrant-officers under the head of "Evening Inspections." On no account is he to overlook

the necessity of having the winches of the chain-pumps "rigged" at evening quarters; nor should he ever forget to enforce the instructions which are given to the gunner, on the subject of the *life-buoy's* readiness for service.

## MUSTERING THE WATCH.

VIDE article addressed to *Mate-of-the-Watch* under this head.

## CLEARING FOR ACTION.

IF there be an occasion more than another, when forethought is indispensable in the executive officer, it is that of "clearing for action." The first-lieutenant should not only be acquainted with all the duties severally assigned to the heads of the different departments, but should also see that each service be carried into execution with promptitude and becoming coolness. A ship-of-war may be surprised by enemy at night; under such circumstances it will behove the senior lieutenant to adopt those measures best calculated to prevent confusion and preserve order.

A frigate,* compared with a line-of-battle ship,

* The lieutenant who performs the duty of executive officer of a frigate, and who has only served in that class of ship, will

can suffer little by sudden surprise,—the hammocks on the lower-deck, however desirable to be stowed in their proper place in the nettings will not prevent the working of the *main* battery. Not so in a ship-of-the-line. A line-of-battle ship dare not go into action until the lower-deck be thoroughly cleared of the hammocks, and that the guns fore and aft be totally disencumbered of the tables, stools, and mess-utensils of the men.

A frigate should be perfectly prepared in five or six minutes at most. A ship-of-the-line, with all appliances and means to facilitate this service, cannot possibly be ready for action in a less interval of time than a quarter of an hour. If that period be the shortest in which the smartest ship can clear her decks, prepare her artillery, and open the magazines, what mischief may not ensue to a vessel that will take double that time, even to be partially prepared. In ships-of-the-line, this service ought to be more frequently made a matter of exercise; and in a manner which will not only promote rapidity in clearing the guns, but which will readily remove

find himself much at a loss, when first called upon, in a two or three deck ship, to clear for action.

to their assigned places all furniture and other articles which encumber the quarters.*

## ACCIDENTAL OCCURRENCES.—TEMPORARY EXPEDIENTS.

THE classification of this work requires that all articles relating to accidental occurrences, or temporary expedients, be placed in juxta-position in those chapters dedicated to the heads of the different departments, whose services upon the occasion of disaster are the first to be called into action. For this reason the first-lieutenant is referred to those chapters entitled "*Practical Hints*," dedicated to the warrant-officers.

* Vide article under the head of "Ship's Company's Tables and Stools."

# CAPTAIN.

## PRELIMINARY REMARKS.

In addressing officers of this grade, on a subject of such delicacy as that of the discipline indispensable on board a ship-of-war, it might have been expedient to anticipate the possible imputation of presumption on the part of the writer. Counsel loses much of its offensive quality, when it is discovered to be the slow growth of years or patient application. So far the writer feels he has a just claim to indulgence, since he can assure the profession, with the strictest truth, that the remarks which appear throughout this work are founded on long experience in the service, and are the result of unremitting attention to the necessity of observing *system*, and the peculiar disposition and marked characteristics of British seamen.

It cannot be disputed that firmness of character and conduct forms the chief requisite for the preservation of a high state of discipline on board a vessel-of-war. Nothing can supply its place; but it should be tempered by moderation, and regulated by discretion. The next in order, and almost equal in value, is self-possession; under which, in the comprehensiveness of the term, may be presumed to be included that inestimable quality, *temper;* without this, it is in vain to expect either dignified deportment or consistency of conduct in a commander, or respect for his character in the seamen.

# GENERAL DIRECTIONS.

It would be a work of supererogation to enter into a minute detail of the multifarious duties incidental to the station of an officer commanding a vessel-of-war,—suffice it to say, the captain is the director of every movement, the supervisor of every service, and the party responsible* for the prompt performance of *all* duties undertaken.

## SUCCEEDING TO THE COMMAND OF A SHIP.

It has long been the practice of the service, for a captain, in succeeding to the command of a ship,

*"Those who have observed the progress of discipline in vessels-of-war," remarks an admiral, celebrated for his just notions of naval discipline, "cannot fail to know that almost every miscarriage, proceeding from the neglect of the officers and company, may be traced to the captain, if he has commanded the ship any length of time."

to adopt some public manner of acquainting the crew of the means by which he proposes to regulate his own conduct, and to enforce obedience in that of others. This is sometimes effected through the medium of an address, publicly delivered to the people assembled on the quarter-deck. The propriety of this practice becomes questionable; measures intended for general announcement, require deliberate consideration. Promises may be made, which may materially tend to confine the captain's future conduct in the management of men placed under his command, and with respect to whose individual behaviour it is impossible to perceive what may arise. Seamen are always averse to *speeches*, and particularly to those that contain pledges. There can be no occasion to advert to pledges, whether relating to rewards, or touching punishments. Neither is the system of the captain turning over to his successor the characters,* *individually*, of the ship's company, at all to be desired. If, in mustering the

* Experience proves it to be more satisfactory to a ship's company, for a captain, in his address, to tell the men openly, that all are *strangers* alike to him;—and he, perhaps, is equally a stranger to them;—and that, as acquaintances are soon made afloat, his predecessor consents to dispense with the usual form of individual introduction.

crew over, some hands are particularly pointed out as "*good* men," whilst others are passed over in silence, those who come under what may be termed *mute* notice, retire with feelings of dissatisfaction, and the former frequently presume upon their "reported" propriety of conduct.

## OBEDIENCE OF ORDERS.

To ensure the complete obedience of orders of all officers, however subordinate in station, the strictest injunctions should be given that commands are never to be issued by any party who is not determined to have them carried into execution. Such monition will prevent much of vacillating conduct on the part of thoughtless and inconsiderate officers of an inferior grade; and superiors, who suffer neglect or disobedience of orders, after being *once* issued, should be subject to the severest official censure.*

## STANDING ORDERS.

In concocting a code of "*standing orders*," the captain is recommended to weigh well the tenor

* All officers should be given to understand, that it is not the *purport* of their commands that is to be considered, for with this subordinates have nothing to do; but, as prompt obedience is the very essence of efficient discipline, it behoves the commanding officer to secure its strict observance.

and extent of each, and to be careful that no direction *clashes* with another, or that any be liable to become a subject of ulterior dispute. A want of due consideration upon this subject has frequently lead to contradictory orders, confusion, and consequences subversive of discipline. For these reasons it is adviseable to issue as few* "*standing orders*" as possible, and that each be simply expressed, so as to admit of *no* misconstruction nor mistake.

## MOTIVES OF ACTION.

"It is not sufficient," observes a flag-officer, distinguished for his enlarged and enlightened views of the service, "for a man who is vested with command, as it may be for a private person, to be himself satisfied that his actions are right. A captain's reasons for acting should generally be made known and explained in public, that it may appear clearly he is actuated by no other motives than the prosecution of the service he is employed upon, and the welfare of the people he commands."

* Some officers, emulous of certain senators, appear to consider a multiplicity of orders, like the statutes of Great Britain, never to be sufficiently augmented—forgetting, that on all occasions in which orders are multiplied, contradictions invariably creep in and stand up in judgment against the framer of his own laws.

Promulgation of purpose, or explanation of motive, are by some officers held to be inconsistent with the dignity due to command; inasmuch as they imagine the means adopted amount to little short of a desire to court popular favour at a servile price. The case* given underneath may serve to demonstrate the fallacy of such reasoning.

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* Two captains, A. and B., are appointed to succeed two officers in command of two frigates, the Arethusa and Bellona. A. is appointed to the Arethusa, and B. to the Bellona. A.'s commission has been hardly read—scarcely has he taken from his predecessor the command of the ship, before he "*directs*" several important alterations to be made in her internal arrangements, as well as in the fitting of the standing rigging, and the reeving and leading of the running ropes.

Admitting, for practical purposes, that A.'s plans are better than those which his predecessor had adopted, yet, as A. does not condescend to explain them, or to make them manifest to those who have to carry them into effect, and who are by no means incompetent judges of their worth, opinions never will prevail in his favour. The tide of prejudice will always set strongly against him; his plans are only looked upon in the light of "*new brooms*," and his *will* and ways are set down as the littleness and caprice of a person impatient to prove his *power*.

B., of the Bellona, desires to effect similar alterations to those which A. has decreed to be *immediately* commenced on board of the Arethusa. But B. proceeds to work in a manner which cannot offend the feelings of any, but which, on the contrary, is well calculated to remove former prejudices, should such exist, as well as to win opinions in favour of his proposed plans. Upon overhauling the rigging, and following with the eye of a seaman the reeving and leading of the running ropes, B. may say to the first-lieutenant, master, and boatswain assembled—"The bunt-lines of the courses, I perceive, are rove the old-fashioned way, and lean

## SACRIFICE OF PERSONAL COMFORTS.

NOTHING will sooner manifest a determination to be just, and to inspire a crew with confidence and respect for the captain's method of administering his public duties, than his evincing little anxiety in regard of his personal convenience. It has been well said, by a shrewd observer, now no more, "that no person's ease should be *sacrificed* to the captain's convenience."*

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forward. Do not they often become twisted, or cable-laid? The top-sail clue-lines too, I see, are not fitted 'whip-fashion;' and you hoist the top-sails by means of jeers, instead of tyes. Well, I don't know, but I think better means might be devised to reeve and lead the running ropes; but, at all events, trial shall decide the matter. Reeve and lead every rope on the main-mast after the proposed plan, and let every thing on the fore-mast remain as already rove." When prepared to put the two methods to trial, the hands are turned up—B. walks round the decks, with the officers, to see there be fair play on both sides, and that the men about to execute the service after one manner have equal room, and the same chances, as those employed to perform the same evolution through the medium of the other. If the sails be clued up, or the top-sails be hoisted two or three times, and if, after changing and interchanging the stations of the men, one method has manifestly an advantage over the other, the better method will, of course, be adopted or retained by B. If the plan of B. succeeds in a manner which will admit of no doubt or cavilling as to cause, he not only attains the object of convincing all the officers and fore-mast men of the utility of his project, but also establishes himself as a quick-sighted and discerning seaman; and, what is still of equal importance, as a man who possesses common sense, and who is desirous to obtain the good opinion of those by whom he is surrounded.

* It is a singular fact, that the disposition to display domestic

"The captain should limit the number of his menial servants as much as possible, even in the largest ships. In proportion as domestics are increased, in the same degree the probability of insolence is augmented. To men, conscious of their own value, nothing is so disgusting as arrogance, founded only on the favour of a chief; and nowhere are menial offices more contemptible than among seamen." *

## PRESERVATION OF SILENCE.

To touch upon a subject of such vital importance as that of SILENCE on board a vessel-of-war, may

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magnificence and pompous parade invariably increases in a ratio proportionate to the capacity and inconvenience of the vessel. The first thing that the young commander did, when he took command of a ten-gun brig, was to "work a traverse" on the master, and to "weather him out of his cabin," in order that this officer's domicile might be converted into a berth for the captain's steward. Such "shifts" produced remonstrances, which eventually caused the master to "hold his own," and to eject the tenant of the pantry, crockery, plate, and all.

What looks more absurd, than to see a sentinel, some six feet in stature, planted at the cabin-door of a ten-gun brig? particularly when the height between decks is so *low*, that the soldier is compelled to forget all the painfully-acquired lessons of the drill-serjeant, and, with "heads up" ringing in his ears, to double his body like a boot-jack, in order to attain a *serviceable* position at his post.

* These are valuable hints, of which, when the period of command arrives, young officers will do well to avail themselves.

possibly appear as misplaced in this chapter. But in addition to the observations which are severally addressed to officers, deprecating NOISE afloat, it may not be amiss to remark that the voice of the captain should be heard as *seldom* as possible, and only upon extraordinary and important occasions. If the hail of the captain be heard, intermixed with mandates of minor import, his voice will not so powerfully prevail, or be so promptly obeyed, at times when every tone should *tell*.

## PUNISHMENT.

IN every case of a man's being brought up for punishment, the slightest indication of passion should be avoided, and the offender thus impressed with the wholesome conviction that the infliction is the necessary consequence of crime, abstracted from all private animosity or prejudice. The moment the painful duty is ended, no inclination should be shewn to keep the *recollection* of it alive by any ill-timed comment, or intimation that, in addition to his punishment, the delinquent is set down in the captain's *private* list. The tendency of such intimation is to make men reckless of the future, and regardless of character, which they, with a good

deal of reason, imagine is irrecoverably lost the moment their name is enrolled, in writing, in that hated record, denominated by men-of-war's men, the captain's "*black* book."*

* Men-of-war's men imagine, that when once recorded in the captain's black-book, they are cut off from the slightest possibility of retrieving their character. A captain in the navy, who prided himself in his knowledge of the seamen of the service, never permitted a man to "leave the gangway" without addressing to the party punished, a few consolatory words in the following strain:— "Roberts, remember, we now start fairly *afresh*. No one is to *remind* you of your having been brought here. It will be your own fault if the recollection of this day is ever revived. Pipe to dinner."

# FIRST COMMISSIONING.

WHEN the captain is appointed to a ship, he will do well to join her with all possible speed. Indeed, it were better that the very service of *hoisting the pendant* should be performed by the hands of the captain, than that he should be absent* from the

* Officers should bear in mind, that when seeking for a first-lieutenant, or "hunting after a good master," the vessel may be commissioned by a *junior* lieutenant, and that this "juvenile" may adopt measures, and pursue systems, calculated to stamp prejudices very difficult to remove upon the occasion of raising men for the ship. Unless the captain be on the spot to set his own system at work, and unless such system be founded upon unerring rules and principles, which are not to be disturbed or shaken by the vacillating views of an inferior mind, His Majesty's ship will acquire a "*bad name*," and will probably remain "man-bound" in port at a pressing period, when the vessel should be ready to proceed to sea. It must be manifest to every commander, that early personal application from a captain will do more on the first fitting of a ship, than a thousand letters or deferred intreaties. Such applications are invariably answered, "too far advanced in the ship's progress,—the application has been made too late."

ship an hour longer than it is necessary to arrange his private affairs.

## FITTING INTERIOR OF THE SHIP.

To prevent the recapitulation of suggestions and considerations connected with this subject, the captain is recommended to consult those chapters dedicated to the different officers, which expressly treat upon the interior fitting of the ship. But if his attention is to be directed particularly to any subject relating to work performed by the dock-yard artificers, it is that which touches upon the subject of the ship's company's stools and tables. In a line-of-battle ship, the manner of fitting these articles becomes a primary consideration with every captain who values the importance of clearing speedily for action.—Vide article addressed to the *Senior Lieutenant*, under the head of "Stools and Tables of the Men."

For "Stowing Ballast and Booms," vide *Master* and *Boatswain*—"Inspection of Gun-geer before leaving the Hulk," vide *Gunner*—For "Bending Sail"—"Formula of Watch Bill, upon the Principle of Partners"—and "Stationing Ship's Company," vide *First Lieutenant*.

# IN PORT.

It is a popular fallacy, that the captain in port has little else to do than to indulge in recreation ashore. In the event of a sudden gale depriving the captain of the opportunity of returning from the shore to the ship, no man upon the books of that ship enjoys so little of mental repose as the *absent* commander.

It is also a "vulgar error" to imagine that all the duties incidental to a ship fitting in port, do not immediately emanate from the mind which not only sets the engine at work, but which becomes responsible for the efficiency and state of the general machinery. Who has to answer to the admiral, or Admiralty, for any apparent delay in the ship's equipment? By whom are official applications made? important interrogations answered? public

letters concocted? and productions, almost amounting to *petitions*, framed for the benefit of the fore-mast men?

But it will not be disputed, that an efficient discharge of his official duties, will, as in the case of every other officer, materially depend upon activity of mind, and general intelligence. Neglect, or even unpremeditated inattention, on the part of the captain, not only tends to retard the execution of contemplated duties, but may also be the means of producing delays detrimental to the public service.*

## LEAVE TO THE SHIP'S COMPANY.

In addition to those observations which are to be found in another chapter,† on the subject of leave to the fore-mast men, a few words are here offered for the consideration of the captain. Restriction of leave is often considered by seamen in the light of tyrannical caprice, and this too when tyranny or

* For example,—the captain omits to sign a "demand" for stores, or other official document of moment. By such omission an essential service is left unexecuted, and duties of paramount importance are possibly deferred, in consequence of an innocent omission, which has been solely produced by a treacherous memory. To be an efficient officer, and one competent to command a vessel-of-war, the thoughts of the captain must never be unoccupied.

† Vide "First Lieutenant."

caprice are the last thoughts that enter the head of their commander—his only object being to keep the ship manned, and not to proceed to sea short-handed. But such restrictions are little calculated to effect the desired end. Desertion always ensues in those ships in which there appears to be an *unaccountable* limitation of leave. It also may be set down as the chief cause of aversion which seamen sometimes entertain for the naval service. It has been well said, "that hardships and privations will be alleviated by relaxation, but of which this system of confinement eradicates even the most distant hopes."

It would seem to be but a justice which the captain owes to himself, to remove from the minds of the fore-mast men, any unfavourable impression which refusal of leave may engender; and when the service to be executed will *not* admit of weakening the complement of "*working* hands," pains should be taken to make manifest the *reason** why such indulgence cannot be granted. Were officers

* Subjoined is the conclusion of a parting admonition of an old admiral to a young commander:—"If seamen are informed with candour, seamen will be sensible of the obligations which bind their captain; and they never will expect that he is to sacrifice his duty to their indulgence."

disposed less to conceal than to promulgate their motives, they would not only satisfy feelings afloat, but satisfy equally the ends of justice.

## SURVEYING INVALIDS.

This is a duty which requires more of consideration than is generally given to the subject. Captains are constantly required to assemble at the hospital, and, in conjunction with the surgeons of their respective ships, to survey such "subjects" as are reported to be "unfit for service." Captains generally leave the decision of the case to the medical men, and so far as professional knowledge is to decide upon the physical capabilities, or rather infirmities, of subjects for survey, the medical officers are the most competent judges to establish the fact. But, in the "Report of Survey," to which the surveying officers have each respectively to affix their signatures, there are certain particulars to record, and "remarks" to make, which can only be effected through the medium of interrogations put to the men by the captains sitting on the survey. And it is here that care should be taken that no question be put to a suffering seamen, worn out in His Majesty's service, which may offend his feelings or

cause him to entertain an opinion unfavourable of the sympathy of his superiors for his forlorn and feeble situation. If from physical infirmities men are to be discharged "invalided from the service," a kind and friendly admonition, a favourable word at parting, will never disserve the state. Whereas the reverse will inevitably tend to give tenacity to prejudices already too firmly rooted.*

* On these occasions, however *sotto voce* the tone of the speaker, or the "subject" applicable to the remark, such epithets as, "the King's hard bargain," and other similar expressions incidental to cases of "over-haul," were better omitted—they subsequently undergo another "*over-haul*," in places little calculated to inculcate feelings favourable to His Majesty's service.

# AT SEA.

## NIGHT ORDER BOOK.

It is of the utmost importance that all orders relating to change of course, or alteration in the position of the ship's head,* be distinctly worded, and *legibly* written. From inattention to the last-mentioned particular, disasters have sometimes ensued.

## NIGHT PRIVATE SIGNALS.

The long duration of the present peace has caused many officers to forget that night private signals are still in existence; or that captains may very unexpectedly be called upon to answer such secret

* Vide article addressed to the "Officer of the Watch," under the head of "Taken aback in the Order of Sailing."

symbols, which are purposely intended to distinguish His Majesty's vessels-of-war from those of other nations. After the captain has written his night orders, he is recommended to "look out," and note in writing the "night private signal"* corresponding to the day and number of the month.

## ATTACHED TO A FLEET.

When attached to a fleet, the captain's first care should be, the adoption of means best calculated to ensure the certainty of preserving the station of the ship in the "order of sailing."—Vide *Officer-of-the-Watch.*

## COMMUNICATING BY SIGNAL.

In communicating by signal, it has become too prevalent a practice in His Majesty's service, to give to the "Telegraph Book" the preference over the "General Code." The impropriety of this

* The signal which a stranger may shew, as well as that the answer requires. By this precaution, the captain will not, if suddenly aroused from sleep, be either confused, or lose time in seeking the signal required. Care must be observed as to the exact *time* in taking out the number, or rather symbolic combination, of the lights required in reply—A.M. and P.M. may make the greatest difference.

practice must be apparent to every commander who can appreciate the value of brevity and *time*, and particularly on occasions when a tardy delivery of commands, or even a few minutes' delay in the conveyance of intelligence, may be attended with the most serious results,* if not with irretrievable loss to the public service. The "telegraphic code" should never be employed,† except when it is found that the "general signals" are inadequate to convey the required "purport." It is true that the "general signals," issued for the use of His Majesty' ships are by many considered an imperfect and complicated code. But the system, indeed, must be sadly defective, if the movements and manœuvres of a fleet cannot all be directed through the medium of the "general signals."

* It may not be generally known, that in the late revolutionary war, an enemy's vessel escaped the vigilance of a British cruizer, in consequence of the commander of a sloop-of-war adopting the tardy medium of the telegraphic code to communicate that the fugitive had quitted port with troops on board, and had been seen steering the point indicated per compass signal. The repeated mistakes made in communicating this intelligence, was said to have been the cause of the mortifying fact.

† The telegraphic code should be resorted to as seldom as possible. One number is sooner answered than fifty. Brevity is as much the soul of business as of wit; consequently, the sooner an order is conveyed, the sooner it can be carried into effect.

Under the head of "Telegraphic Signals," addressed to the "SIGNAL MIDSHIPMEN," the captain may peruse a few passing remarks touching the *similarity* of sound in certain letters of the alphabet.

## CHASING.

THIS subject involves a variety of "conditions," and admits of too many hypothetical cases to be discussed in a work of this nature. A few observations, however, touching the most approved principles for general purposes, may not be deemed as misplaced in this portion of the work.

Upon the discovery of a strange sail, standing directly towards the ship, the cruizer, then being under low sail, should exhibit nothing of lofty canvas, until it becomes apparent that the stranger has discovered the cruizer. Should the cruizer have her broadside presented to the stranger, and the latter be bearing down directly upon the former, it will be advisable to put the ship's head the other way, in order that the *distance* between the masts be not made discernable to the ship to windward. Should the stranger appear to be *suspicious*, and haul her wind to avoid closing with the cruizer, the mode of pursuit should be then regu-

lated by one undeviating rule, viz., to keep the chase always upon the nearest point of proximity; and upon no account to follow the fallacious, common-place practice of "tacking as soon as the chase is brought to bear *abaft* the beam."

*Theoretical* tacticians differ as to the relative point of bearing, at which invariably it is most advantageous for the chaser to *tack* when plying to windward in pursuit of a fugitive vessel. But confidence should never be placed in speculations touching the chances of a change of wind. If the chaser keep the chased as nearly as possible in the *stream* of the wind, he will not, in the event of any alteration occuring in point of position, be much in error. Whereas, a *speculative* course may be the means of throwing him considerably out, and increasing the distance between the two vessels, if the wind do not shift to the point desired by the chaser.*

* It has been recommended, by one or two authorities who have treated upon the subject, for the chaser to heave about as soon as the vessel pursued becomes on the beam of the former, or, as tacticians term it, in that position which brings the chase to bear in a line perpendicular to the chaser's course. This manner of manœuvring necessarily involves a constant succession of tacks upon the same point of bearing. But, if the ship be "well-worked," the yards smartly hauled, and the sails quickly trimmed, the advantage of repeatedly tacking in smooth water will always tell in favour of the chaser, and the distance apart between the

CHASING.—GOING LARGE.—In chasing, when sailing large, and not directly astern of the vessel pursued, the primary object of the pursuer should be to ascertain that course which will keep the fugitive upon one fixed point of the compass, and which must be the shortest line upon which the vessel chased can be closed.

The quantity of sail to be carried upon this occasion not only requires the exercise of a nice nautical judgment, but also a public manifestation of duty,* which will at once set suspicion at defiance, and silence idle and malicious remark.

## SUDDEN DISCOVERY OF DANGER.

VARIOUS are the causes, here, (unnecessary to enumerate,) which may be unforeseen by seamen, and

two vessels (if the chaser be the fastest sailer) will *diminish*, and not increase—a result of frequent occurrence—when the chaser adopts the contrary system of pursuit.

* If, when chasing an enemy in the presence of a senior officer, the ship becomes so pressed with sail as evidently to diminish the velocity of the vessel, and to increase the chance of accidents to the masts of the ship, it is the bounden duty of the captain to intimate to his superior, by signal, the counter effect produced by such *pressure*, and the mischief likely to ensue to the "complaining spars." Few commanders have ever erred by carrying too little canvas when in pursuit of a flying foe; but many, from mistaken motives, and from a desire to exhibit proofs of zeal and intrepidity, have not only lost the spars of the ship under their immediate command, but also have experienced the mortification

which may be the means of bringing a ship into sudden and unexpected peril. The more sudden the danger, the more difficult the task to allay alarm, and to avert the fatal effects consequent upon panic depriving the people of their self-possession. Upon an occasion of this kind, "the captain," as has been well observed, "has a conspicuous and important part to act. Upon him all eyes are turned; according to his looks and actions, hopes or fears predominate." Whatever be the case, however hopeless the prospect to ensure the safety of the ship, or preserve the lives of the crew, the commander is first called upon to *command* himself—to issue his orders in a cool and collected tone, and to exhibit in his personal deportment a firm and undaunted bearing. Such manifestations of demeanour and conduct will at once inspire a general feeling of confidence in the superior resources emanating from the *superior* mind—diminish the apprehensions of the timid, and encourage the exertions of the brave.*

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of losing the object of their all-anxious pursuit. In support of these observations, several cases might be cited.

* A flag-officer thus forcibly expresses himself.—"In such situations, true courage finds a *proper* sphere of action; no fame, no glory, attends on fatal shipwreck; but, in that distracting case, the noble mind stands self-supported, cool, and intrepid, even in the jaws of death."

## CLEARING FOR ACTION.

When the subordinate officers perform promptly those duties respectively assigned to them preparatory to action, the mind of the captain will not be diverted from maturing his mode of attack, or his manner of meeting the enemy's assault. But no commander should *conceal* from the officers and crew his plan of attack. The commissioned officers, and particularly the master, should be made acquainted with the intention of their superior. And if ever it be permitted on the quarter-deck of a vessel-of-war to interchange undisguised opinions, it is upon the occasion of going into action. The captain should not be satisfied that his plans are rendered intelligible to all parties, until each, individually, is made to manifest his perfect comprehension.

## COMPOSITION OF PUBLIC LETTERS.

In public letters, none but the most important particulars should be given, and such should be stated as concisely as possible. Studied language and pompous diction should be always avoided, especially in detailing insignificant services.

## DIPLOMATIC CORRESPONDENCE.

As captains are often placed in situations which require no little exercise of *diplomacy*, it would be

well that they should study the elements of this branch of political science. In carrying on negotiations by written documents, captains cannot be too wary. The words "*Litera scripta manet*" should always be present in their minds. An unguarded admission or inconsiderate expression may give the opposite party an advantage which may lead to injurious consequences. In order, therefore, to keep clear of the possibility of *compromising* their government, it would be safest to deal, as far as possible, in generalities, so as to give no vantage ground to opponents.

The following extracts of letters from Lords Nelson and Collingwood, will in some degree illustrate what is here said, and will, moreover, give the reader a curious specimen of the minds of those great men. The interest is the stronger, from the circumstance that both letters relate to one and the same subject.

*From* LORD NELSON *to* LORD STRANGFORD, *at Lisbon.**

"I shall state my complaint of the circumstances which generally happen at Lagos. A ship-of-war goes

* This letter was written on board the "Victory," October 3, 1805.

there for water and refreshments, which, by treaty, she has a right to: from her communication she seems placed under the direction of the consul of one of our enemies, and very improper language is held by our enemies to the British officers and seamen, and inducements held out to them to desert. The enemy's consul then directs that only so many cabbages, or bullocks, or sheep, shall go on board, and, at his will and pleasure, so much water; and it has been carried so far, that a captain, whose ship was complete with water, giving his proper water to wash the linen, on sending ashore for more, was threatened by the Portuguese sentry, to be fired upon, if they presumed to attempt to take a drop. To this degradation no nation can submit.

"Now, what I demand is, that our officers and men, whilst in the neutral port, shall be under the protection of the neutral flag, and not be permitted to be insulted by the interference, either secret or open, of our enemies; and that every ship which goes into Lagos, or other ports, shall have such refreshments as are reasonable. And as to water, I never before heard that any limited quantity was allowed, much less that if a dirty shirt was washed, any French or Spanish consul should be allowed to say, 'You English shall either wear a dirty shirt, or go without water to drink,' and that a sentinel of a neutral power should presume to threaten to fire, if an ally presumed to take water.

"I shall send a ship or ships to take in water at Lagos. They shall wash, or let it run overboard, if they please; and I rely that the Portuguese government will direct that our enemies shall not insult our people, much less dictate to the Portuguese governor for his treatment of us. However degraded the Portuguese

may allow themselves to become, it is hardly fair that they should expect us to be insulted by our enemies on their neutral ground: for if, by words or any other mode of warfare, they do permit it, I shall certainly retaliate."

*From* LORD COLLINGWOOD *to* LORD ROBERT FITZGERALD.*

"I have received the honour of your Lordship's letter of the 17th, enclosing a note which had been written to you by the Portuguese government, than which nothing can surprise me more. It is a complaint made where they confess that no offence has been given.

"I have long been fully sensible of the jealousy entertained by the French, of our ships being supplied with refreshments from Portugal; and, anxiously desirous that a nation between which and Great Britain so long and so faithful a friendship has subsisted, should not be subjected, on that account, to disagreeable discussions with our enemy, I have forborne to send ships to their ports. Those that have been at Lagos of late were merely there by chance, for the purpose of refreshing their crews. It is reported to me, that they have been supplied, but not in that free and liberal manner to which, by treaty, the subjects of His Majesty have a right, and which is due to the friendship and affection which have been so long established between the two countries. Instead of the free use of the market, where they might furnish themselves with fruits and fresh provisions, they have been limited to a portion insufficient for half the crew; and even

* Dated on board the "Queen," off Cadiz, April 26, 1806.

the number of casks of water which they were to have, has been determined.

"If, by the other means of being supplied to which the minister of Portugal alludes, is meant that of taking such supply secretly by night, I did give strict orders that no such illicit correspondence should be held. What is due to neutrality we have a right to receive in the face of day. If Portugal be unhappily in such a situation that she must veil her friendship, and look sternly on those whom she was wont to welcome with open arms, her misfortune is to be deplored; but I never will allow the dignity of the British flag to be questioned by the ships engaging in an intercourse which will not bear to be looked upon by the whole world."

# PRACTICAL HINTS.

## NAVAL TACTICS.

THE vague definitions of the several authorities who have treated on the subject of naval tactics, added to the ambiguous and often perplexing tendency of the terms which tacticians employ for the specific purpose of *contradistinction*, have not only deterred officers from pursuing a study which, when clearly comprehended, is of the first professional importance, but have also, in the execution of evolutionary movements, not unfrequently led to considerable confusion afloat.

It is not intended to dwell upon the propensity of tacticians to mystify movements which are often simple of solution, nor to dilate upon their constant *misapplication* of terms. A few examples will

suffice. For instance, tacticians speak of the "*second ahead*," and the "*second astern*," when they endeavour, by their own demonstrations, to shew, that it is the ship *next* in succession ahead, and *next* in succession astern, which they immediately mean; forgetting that the word *second* bears a close affinity to the numerical term *two*. Besides, if there be a *second* ahead, and a *second* astern, the inference is, that there must be, somewhere, a *first*, from which to "commence the count," or, as sailors say, to "begin the tally." But with tacticians this is not the case, for by *their* mode of calculation the second frequently becomes the *first*, and the first as frequently the *second*.* It would, however, seem that the tactical term of second is an

* To demonstrate this matter beyond dispute, the following case is supposed. Ten vessels are ranged in the order-of-battle, and the admiral makes the signal to No. 4. to support the second in the line ahead. A stranger to the "*second*" system of reckoning, proceeding upon correct arithmetical principles, will immediately advance to the succour of *two* in the order of battle; but here, according to tacticians, he will be "out in his reckoning," and perhaps lose his commission for adhering too rigidly to the rules of "*Cocker*." The fallacy of this reckoning may be further demonstrated:—a man starts to walk a mile from A. Does the pedestrian count A. at starting, as *one*, or does he await until he arrives at B., to complete his mile? Because, if A. is to be counted as *one*, B. must be reckoned as *two*. Paid porters, or drivers of "jarvies," would turn this *second* system of reckoning to profitable account.

old-established* favourite, though it would be difficult to trace who was the first afloat that adopted this second system of reckoning.

Again, tacticians treat of the "line ahead," the "line abreast," the "line of battle," the "line of bearing," the "line of sailing," (a strange phrase, by the by, as if *any line* a fleet can form when not actually at anchor can be any thing else but a line of sailing,) "the line of retreat," and the "bow and quarter line."

If a little attention be given to the subject, or a little trouble taken to "overhaul" the several lines of "*contradistinction*," it will be found that, in certain cases, when put into practice, the majority of the *list* will assume one and the same *identity* of form,—in other words, one and the same position.

In a work recently published upon "Naval Tactics," the "line of bearing" is thus defined:—†

* Only that the author of these pages has ever held the olden school in the highest veneration, he might here be inclined to cherish the notion, that our nautical forefathers preferred the adoption of the *pugilistic* phrase to the more appropriate application of the numerical term.

† It is by no means the purpose of the author to depreciate the utility of tactics; but it may be safely asserted, that instead of making the subject intelligible to the naval reader, it would almost appear to have been the aim and end of those who have treated upon the theme, to mystify the "*science*" in a most unmerciful degree.

"The line of bearing is that by which a vessel is *impelled*, to enable her as near as possible to approach the wind."

The *impelled line* is left to the elucidation of others.

Again, the following passage, demonstrating a diagram, appears in the same work:—

"If the ships Q. R. or S. T. be ranged on one of the two lines of bearing, and are not *standing* on the line of bearing *on which* they *are ranged*, are said to be in line *of sailing*; thus, the ships Q. R. are on the starboard line of sailing, because, being ranged on the starboard line of bearing, they are sailing before the wind, and the ships S. T. are in larboard line of sailing, because, being ranged on the larboard line of bearing, they are *standing* to the wind on the starboard tack."

The author of these pages perfectly comprehends the position of sailing which the translator of the work in question would endeavour to convey; but the words marked in italics, the confused phrase of not *standing* on the line of bearing on which they are *ranged*, are every way calculated to capsize the under-*standing* of the professional student. The "line of sailing" is an absurd phrase, and should be abolished, as a technical term of no definite meaning.

Another writer, defining the "line of bearing," thus flourishes, or rather flounders, in print:—

"The line of direction which a fleet preserves in either of the orders, is termed the line of bearing of the order. Thus, the line of bearing of the order-of-battle is six points from the wind on either tack; the line of bearing of the order of retreat is *across* the wind; and the line of bearing of the order of sailing is the *course* steered!!"

What absurdity! the line of bearing of the *order* of sailing is the course steered!!! The *course* this writer should have steered is sufficiently obvious.

The limits of this work will not admit of any thing like a muster of the numerous anomalies and *misapplied* expressions to be found in the ponderous tomes* which have been published on *naval tactics*; nor can space be afforded to enter into any lengthened analysis of the "science." To simplify the subject, and to render, for practical purposes, more easy the execution of those evolutionary movements which are often requisite to be performed by a fleet at sea, are the only objects aimed at by the author of these volumes.

The *secret* of the science may be said to consist in

* The hypothetical cases of tactical writers are so encumbered with "*remarks*," and so clogged with "conditions," that it is difficult to determine which the theorist intends to illustrate his position—the *original* problem, or the appended "*remark*."

comprehending the principle of each line of bearing —"starboard" and "larboard." Unless the utility of either line, or rather the *range*, (for both lines of bearing are merely those two lines upon which, according to the direction of the wind, vessels composing the columns or divisions of a fleet are relatively ranged,) be clearly conveyed to the mind, naval evolutions, and more particularly simultaneous movements, will seldom, if ever, be performed with *precision;* the execution of such movements will be merely a matter of *guess.*

The following definitions and figures are offered to illustrate the

## LINE OF BEARING.

THE line of bearing is a line six points from the wind, upon which line the ships composing a fleet, squadron, or column may be *ranged* in any position which will admit of their being *prepared* to form in line-of-battle,* by means of a simultaneous movement.

Since there are *two* lines on which the ships of a fleet, "close hauled," form in line-of-battle,—namely,

* The line of bearing would seem to be a general expression—the line of battle, a particular case of it. It is probably to the want of a proper observance of similar distinctions, that the confusion and perplexity arising from the use of the numerous and unnecessary terms in naval tactics may be attributed.

the LINE-OF-BATTLE on the *starboard* tack, and the LINE-OF-BATTLE on the *larboard* tack, so are there also TWO LINES OF BEARING, the *starboard* and the *larboard.*

THE STARBOARD LINE OF BEARING is that line upon which the ships composing a fleet, squadron, or column may be *ranged,* whether sailing by the wind or sailing large, preparatory to forming the line-of-battle on the *starboard* tack,—which evolution is effected by means of a simultaneous movement, such as tacking, wearing, or coming to the wind "*together.*"

THE LARBOARD LINE OF BEARING is that line upon which the ships of a fleet, squadron, or column may be ranged, whether sailing by the wind or sailing large, preparatory to forming the line-of-battle on the *larboard* tack,—which evolution is effected by means of a similar movement to that which forms the starboard line of bearing.

Since the ships which compose the fleet, squadron, or column, when *ranged,* may, on either line of bearing, be *standing* with their heads across that which they are collectively required to preserve,—it follows that they will sometimes be on the *larboard* line of bearing, when *standing* on the *starboard* tack; and at other times on the *starboard* line of bearing, when standing on the *larboard** tack.

CASE I.

THE two following figures will clearly and fully illustrate the foregoing observations:—

* This may serve to solve that apparently paradoxical purport to be found in the pages of the "GENERAL SIGNAL BOOK," "Preserve the *starboard* line of bearing, though sailing on the *larboard* tack, and *vice versa.*"

Fig. 1. Fig. 2.

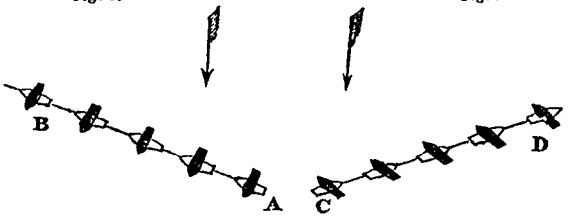


FIGURE I.—Suppose the wind be at north, *A B* a line W. N. W. and E. S. E., or six points from the wind, and that the ships ranged on it are sailing large in the S. W. direction. It is clear, that if they haul to the wind *together*, on the starboard tack, they would form the line *ahead*,* or line-of-battle on the *starboard* tack. The ships (marked in black) are accordingly on the *starboard* line of bearing, sailing large on a S. W. course.

FIGURE II.—Again, the wind being at north, as above, let *C D* be the E. N. E. and W. S. W. line, or six points from the wind, and the black figures the ships close hauled on the starboard tack. It is evident, that if they wore or tacked *together*, they would form the line ahead, or line-of-battle on the *larboard* tack. The ships marked in black are accordingly on the *larboard* line of bearing, though standing on the *starboard* tack.

## THE LINE-OF-BATTLE.

A FLEET is formed in the line-of-battle, when the ships composing it assume a position of sailing in *succession*, six points from the wind on either tack.

* The reader will perceive, as has been already observed, that in this instance the line ahead, and line-of-battle, assume the *same* position.

### THE ORDER OF SAILING

Is that particular position in which a fleet is formed for the purpose of preserving order and regularity in the several columns, whilst cruising or steering a certain course.*

### THE LINE ABREAST

Is that position of sailing in which a fleet is formed when the ships composing the column or columns pursue a course parallel to each other, and each is brought to bear exactly abreast of the other. This position of sailing is commonly used when the wind is right aft.

### SUCCESSIVE MOVEMENTS.

All manœuvres to be performed in succession,† require that the ships composing the column or columns await the execution of the desired movement, until each vessel relatively arrives in the wake of her immediate leader.‡

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* The number of vessels composing the fleet, together with the locality of the cruising ground, will always determine the number of columns into which it may be desirable to divide the order of sailing. In a large fleet, and with plenty of sea-room, many officers prefer sailing in *three* columns; but for general purposes, and particularly in confined or narrow channels, the preference must be given to *two*.

† In all successive movements, attention should be paid to the preservation of *distance* in the line, and particularly when tacking in succession, to allow sufficient time for the relative leader to brace-up and gather way, before the ship next in succession astern heaves in stays.

‡ How much better this term than the "*second* ahead."

## SIMULTANEOUS MOVEMENTS.

SIMULTANEOUS movements are always to be recommended. They are not only more convenient and expeditious, but are also, especially in bad weather, attended with more of safety than those which are executed by ships in succession.* When evolutions are performed *together*, all ships are under the *same* circumstances at the *same* moment,—and, hence, relative distances are liable only to be slightly disturbed.

## CHANGING POSITION.

### CASE II.

FROM the line-of-battle on the starboard tack, wind north, fleet heading W. N. W., to *change* to a position of sailing which requires the starboard division to sail large, steering south, on the larboard line of bearing; and the larboard division to steer the same course, preserving the starboard line of bearing. This position of sailing, it will be seen, forms an obtuse angle, and assumes a figure which may be turned to available account, if chased by a superior force.†

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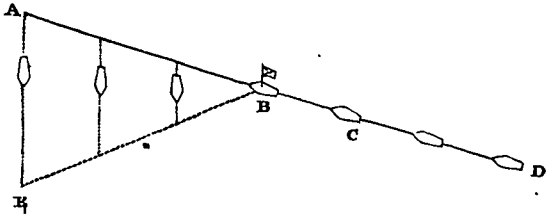
* Those officers who have served under Cornwallis, Gardiner, Cotton, and others, will remember that the interval between the first making of the signal and the completion of the manœuvre by the sternmost ships, occupied sometimes a period of *four hours!* During the whole of this time, it was necessary to keep the "watch," and, if the weather was bad, "all hands," upon deck; consequently, at night, it was exceedingly harassing to the crews of the fleet.

† This form of sailing is termed by tacticians, the "line of retreat;" a manifest misnomer, because, the order of sailing entirely depends upon the *two* divisions preserving with precision the *two* lines of bearing.

The method of executing this movement with promptitude and precision, is as follows:—

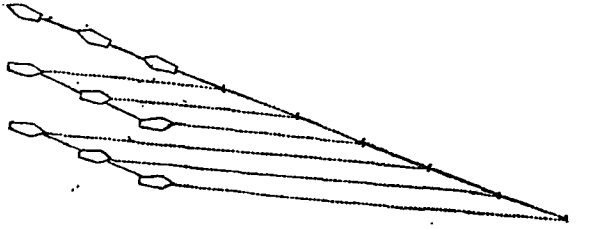



The ships are formed in the order of battle on the starboard tack. *B* bears the flag of the commander-in-chief. The larboard division, *C D*, remains stationary, but ready to bear up *together*, the moment the ships of the starboard division, *A B*, are relatively ranged on the larboard line of bearing, *E B*. The starboard division, particularly the van ships, will increase sail according to the distance each has to run respectively, to bring the admiral on the larboard line of bearing.*

CASE III.

FROM THE ORDER OF SAILING in three columns on the starboard tack, to form the line-of-battle on the weather column—

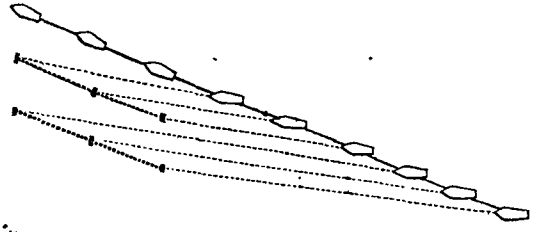
* Some tacticians effect this evolution by both divisions bearing-up together; but this method does not complete so expeditiously the order of retreat, inasmuch as the starboard division would have to press considerable sail to reach the range E B, or larboard line of bearing. The division C D, including the admiral, B, may, under easy sail, keep the van ships of A B a considerable time in getting up to the desired direction.



"The weather column keeps under easy sail, while the centre and lee lines tack or wear together, and keep two points away till they arrive in the wake of the van," * when each ship tacks and assumes her station.

CASE IV.

FROM THE LINE-OF-BATTLE on the starboard tack, to form the order of sailing in three columns—



"The weather column keeps under very easy sail, merely to keep the ships under command. The centre and sternmost columns keep away one point together, preserving order, the latter making more sail than the former, as it has twice the distance to run. As soon as the leading ship of the centre brings the leading ship of the headmost column exactly in the wind's eye of her, (or rather a little before, in order that she may not shoot ahead of her,) the ships of the centre column haul to the wind together.

* Vice-Admiral Raper's "Tactical Evolutions."

"The sternmost column preserves the same movement as the centre, and on arriving in its station, hauls to the wind together."*

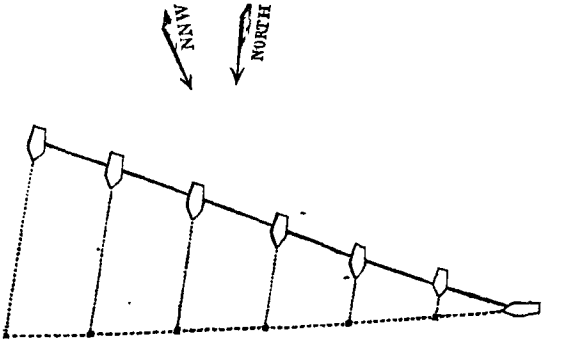
It would be an endless task to demonstrate the many hypothetical cases which tacticians assume in situations which relate to "Interchange of Stations," and to the complicated movements of inverting columns. Suffice it to say, that many of these paper positions are impossible to put into *practice*.

## SHIFTS OF WIND.—RESTORING ORDER.

### CASE V.

THE FLEET IS FORMED IN THE ORDER OF BATTLE on the starboard tack, when the wind, which has been at north, suddenly shifts to N. N. W. The line is required to be *restored* on the same tack. The annexed figure shews the sternmost ship's position after her head has broken-off from W. N. W. to *west*.

To restore the order of battle, the following method will be found the most expeditious:—




* Vice-Admiral Raper's "Tactical Evolutions."

The sternmost ship remains stationary, and is to be considered as the *pivot* ship, upon which the other vessels are to form the line anew. The ships ahead bear up *together;* the van ships increasing sail according to the increase of distance they have relatively to run. The course to steer, for the vessels which bear up together, is previously to be ascertained, as given in the rule below; the ships arriving ahead of the pivot astern, will haul to the wind, and heave to; and this movement, and subsequent method of remaining stationary, must be followed by each ship successively, until the line is again restored.*

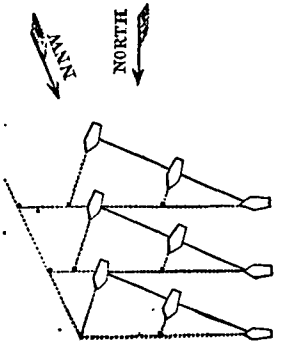
RULE FOR ASCERTAINING THE COURSE FOR SHIPS TO STEER FROM ONE TO FOUR POINTS:—Deduct from eight (eight being one-fourth of the compass) one-half of the number of points which the wind has changed. For example: suppose the wind has *headed* four points, deduct two, half the number it has headed, from eight, and six will remain, the number of points required for the ships to bear away. So that if the wind had been at north, when the fleet on the starboard tack were heading W. N.W., and it suddenly changes to N. W., the heads of the ships of the fleet would break off to W. S. W. The

* Tacticians effect this object in a different way, viz.—commencing the movement of bearing-up from the van in the order of succession; and sometimes, in fleets, each officer selects his *own* course. Both methods are subject to objection; the one produces *delay*, and the other *confusion*. And it should always be borne in mind, that when vessels performing simultaneous movements are compelled to steer a course *parallel* to each other, *accidents* can never occur.

course required to steer, in order to form the line anew on the pivot-ship astern, will then be south. This is a simple rule, and one of ready recollection.

CASE VI.

TO RESTORE THE ORDER OF SAILING, when the fleet is formed in three columns, and the wind has drawn forward two points.




The course being previously ascertained for the ships composing the different columns to bear up together, the sternmost ship in each column heaves-to, whilst those pertaining to their respective columns bear-up simultaneously, and proceed to form on the

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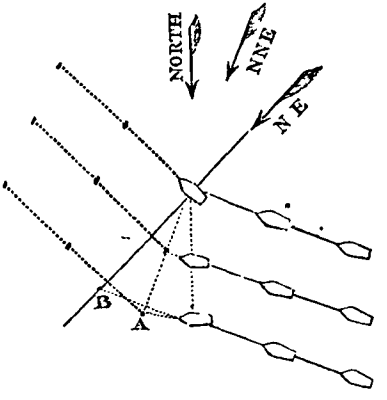
NOTE—The same method may be pursued if the wind shifts three points. But if it shifts four or more points, it is recommended by Admiral Raper, to let the ships pay round on the other tack; and then form a new order of sailing. This practice is recommended by the admiral, from the probability of the ships being taken aback, when a shift of wind exceeds more than four points.

pivot-ship of their relative lines; the leader of the weather-line taking up a position in the wind's-eye of the leaders of the two other columns.

CASE VII.

To restore the order of sailing when the fleet is formed in three columns, and the wind has drawn *aft* two points.




The diagram above shews that the only ship which remains in her station is the *leader* of the weather column; therefore the leader of the weather column hauls to the wind, and keeps under easy sail, followed by the ships of that column as they arrive successively in his wake. The leaders of the centre and lee columns, followed by their ships respectively in succession, proceed on the courses pointed out to regain their stations in the new figure, and then haul to the wind.

RULE.—"The rule serves for any number of points the wind may draw aft: thus, if the wind had shifted to N. E:, the leader of the lee column, instead of steering for A, (the position in which he will haul to the wind when the wind shifts to N. N. E.,) will proceed to B, and then haul to the wind, followed by the ships of that column in succession.

"The leader of the centre steers the same course as the leader of the rear; the latter has been selected to illustrate the figure, having a greater distance to run." *

* Admiral Raper's "Evolutions."

# NAVAL BATTLES.

THE profession are already acquainted with the published production of a gallant and distinguished flag-officer,* entitled "Naval Battles, critically reviewed and illustrated," &c.

To discuss minutely the many subjects which have come under the rear-admiral's critical notice, is not the intention of the present work. This paper, therefore, will only embrace those battles which have more particularly contributed to the glory of England; commencing with the action of the celebrated "1st of June, 1794," being the first general engagement fought in the French revolutionary war.

* Rear-Admiral Sir Charles Ekins, K. C. B. &c.

First of June.—Admiral Ekins, after entering into considerable detail, illustrative of the various positions occupied by the hostile fleets in their partial encounters on the preceding days, of the 28th and 29th of May, represents the British fleet, on the memorable morning of the "1st of June," to be to windward of the enemy, in a line-a-head* on the larboard tack, parallel to the latter. The British fleet, with the view of bringing the enemy to battle, is next described as bearing up together in a line-a-breast, each ship steering exactly for her opponent in the line, and thus endeavouring to break through the revolutionary fleet, and bring them to close action to leeward. In reference to this mode of attack, Admiral Ekins observes, that "the British admiral (Lord Howe), finding his fleet to occupy a line parallel to that of the enemy's, determined upon a vigorous attack upon his whole line, rather than lose a moment by making a different arrangement; though it will be admitted, that an attack on a particular part of it, by a superior force, might have been attended with greater success upon this occasion."

There can be no question but that his lordship was heartily tired of fighting in fogs. He was, moreover, annoyed by the liability of his signals to be mistaken, and, above all, by the egregious blunders (to say the least of them) committed by the leading ship of his line (the

* The line-a-head, it will be seen, the rear-admiral employs as synonymous with the line-of-battle.

"Cæsar") on the preceding days, of the 28th and 29th of May. Taking, therefore, all circumstances into consideration, perhaps it may rather become a matter of question whether the mode of attack adopted by his lordship, as being decidedly the most simple, was not the most likely to ensure success; as doubtless his lordship naturally conceived, that, by previously directing each ship to place herself close alongside of her opponent in the line, no material mistake either as to signal or "order of sailing" could possibly occur. With respect to his not following the flight of the enemy, Sir C. Ekins observes, after alluding to the circumstance of a signal *said* to have been made by the second in command, (Admiral Graves,) for "a *general chase*," that—

"Lord Howe, in countermanding this signal, probably judged of the state of his fleet by the condition of the *Queen Charlotte*, *Queen*, *Defence*, and some others, more severely handled than the rest; for it is well known," adds Sir Charles, "that there were still a sufficient number left to have stopped the fugitives; but the responsibility was entirely his own, and it appeared to him (Lord Howe) that the greatest number of the British fleet were at this time so disabled or widely separated, that they could not be detached after them."

Whilst it is to be presumed that these observa-

tions are well founded, it may not be amiss to remark, that if, from casualties or unforeseen occurrences in action, a commander-in-chief has not the power of making himself exactly acquainted with the state of his fleet, those captains whose ships are in a condition to chase an enemy already in flight, ought not to hesitate a moment to pursue them, or at least to *ask permission* to do so by signal. No officer, on such an occasion, need question the propriety of his conduct, or at all apprehend that his senior will view it as officious.

St. Vincent's.—The engagement of the 14th of July, off Cape St. Vincent, may be said to be one in which the finest possible field was afforded for exhibiting a knowledge of naval tactics, and consequently for displaying to advantage the ability of Nelson. The British, consisting of only fifteen sail of the line, were opposed to an enemy of twenty-seven in number.

It is well known that, in this action, Sir John Jervis, and the captain of the fleet, Sir Robert Calder, differed in opinion as to the practicability, as well as the propriety, of effecting certain proposed evolutions, and that, after the engagement commenced, Nelson (then commodore) thought fit

to pursue a system of attack for himself, which was adopted by several others.

The relative positions of both fleets, when first discovered by each other, were as follow:—The Spanish fleet was standing on the starboard tack (the wind W. by S.), scattered, and detached in two separate divisions, the weather part being the most numerous. The British fleet, in the order of sailing in two columns, was also standing on the starboard tack astern of the enemy; the weather division of the Spaniards being on the weather bow of the British, and the lee division of the former a little on the lee bow of the latter. From the "order of sailing" in two columns, Sir John Jervis, with the "greatest celerity," formed his line-of-battle into one line-a-head, carrying all possible sail to get between the two divisions of the enemy, so as to prevent the weather part forming a junction with their division to leeward. This he had completely effected, when both divisions of the Spaniards tacked in succession; the weather part edging away off the wind on the larboard tack, trying to get round the rear of the British, (all of which were yet on the starboard tack,) until Nelson, perceiving their intention, immediately *wore* round to intercept their progress, whilst the lee division of the enemy were hugging the wind on the larboard tack, endeavouring to weather the van of the British. This attempt was rendered fruitless by the greater press of sail carried by the latter; and the Spaniards, failing in their object, were exposed to a heavy fire from a few of the leading ships of Sir John Jervis's centre. Previously, however, to this partial encounter with the lee division of the

enemy, the British admiral, intent upon making an attack upon the rear of their main body to windward, had directed his fleet, beginning with the van, to "tack in *succession*," pursuant to his original mode of attack. On tacking at this period, in succession, Sir C. Ekins remarks, "When we compare the position of the fleets with the signals of the commander-in-chief, we are led to imagine that the *rear* of the enemy to *windward* was the object it was his intention to attack;" and that, after having placed himself between the weather and lee divisions of the enemy, so as to prevent their junction, "he might very probably have succeeded to his wishes, by cutting off many of their sternmost ships;" but "the new and important events that were taking place in the rear of Sir John Jervis's line obliged him to change his intention, and hasten to support Nelson and his followers.* By this judicious measure he supported and covered the attack, and secured the captures made. It may yet appear, that by *wearing* the whole line in quick *suc-*

* The following letters passed between Nelson and Collingwood on the day succeeding the battle.

"Irresistible, 15th February, 1797.

"My dearest Friend,

"'A friend in need is a friend indeed,' was never more truly verified than by your most noble and gallant conduct yesterday, in sparing the *Captain* from further loss; and I beg, both as a public officer and a friend, you will accept my most sincere thanks. I have not failed, by letter to the admiral, to represent the eminent services of the *Excellent*. Tell me how you are, what are your disasters. I cannot tell you much of the *Captain's*, except by note of Captain Miller, at two this morning, about sixty killed and wounded.

"We shall meet at Lagos; but I could not come near you

*cession*, beginning with the *sternmost* ships, still more might have been accomplished."

There can be no question, when the British fleet passed on the starboard tack between the two divisions of the enemy, so as to prevent a junction between their main body to windward and the smaller portion to leeward, much time was lost in

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without assuring you how sensible I am of your assistance in nearly a critical situation.

"Believe me, as ever,

"Your most affectionate,

"HORATIO NELSON."

"Excellent, February 15th, 1797.

"MY DEAR GOOD FRIEND,

"First, let me congratulate you on the success of yesterday,—on the brilliancy it attached to the British navy, and the humility it must cause to its enemies; and then let me congratulate my dear commodore, on the distinguished part which he ever takes when the honour and interest of his country are at stake. It added very much to the satisfaction which I felt in thumping the Spaniards, that I released you a little. The highest rewards are due to you and Culloden: you formed the plan of attack,—we were only accessories to the Don's ruin; for, had they got on the other tack, they would have been sooner joined, and the business would have been less complete. We have come off pretty well, considering—eleven killed, and fourteen wounded. You saw the four-decker going off this morning to Cadiz,—she should have come to Lagos to make the thing better; but we could not brace our yards up to get nearer. I beg my compliments to Captain Martin: I think he was at Jamaica when we were.

"I am ever, my dear Friend,

"Affectionately yours,

"C. COLLINGWOOD."

"tacking in *succession*;" and that the efficacy of the manœuvre, suggested by Admiral Ekins, was exemplified by the manner in which Nelson (who commanded the *Captain* in the rear) succeeded in the execution of this movement.

CAMPERDOWN.—The next general engagement to which allusion is made, is that of Camperdown, an action which must excite, in every officer and seaman in the service, the utmost admiration of the British commander in this engagement. An extract is here subjoined from the admiral's official letter, to explain the position of both fleets previously to commencing, as well as ending the engagement.

"At nine o'clock in the morning of the 11th," says Admiral Duncan, "I got in sight of Captain Trollop's squadron, with the signal flying for an enemy to leeward; I immediately bore up and made the signal for a general chase, and soon got sight of them, forming in a line on the larboard tack to receive us; the wind N.W. As we approached I made the signal to shorten sail, to connect the squadron: soon after I saw the land between Camperdown and Egmont, about nine miles to leeward of the enemy; and finding there was no time to be lost in making the attack, I made the signal to bear up, break the enemy's line, and engage them to leeward—each ship her opponent, by which I got between them and the land, whither they were fast approaching."

In this battle, the hostile fleets were equal in numerical force, there being exactly on both sides sixteen sail of the line. By the preceding extract

from Admiral Duncan's despatch, the reader is to infer that the admiral availed himself of no other advantage, as to tactics, but that of breaking through the enemy's line, each ship attacking her opponent to *leeward*. This was effected with facility, from the circumstance of the British possessing the weather-gage, whilst it answered the double purpose of striking terror into the enemy, as well as probably preventing their ultimate escape, by getting the British fleet between him and the land. It, however, may be asked why the British admiral preferred this mode of attack to that of bringing his whole force to bear upon a part of the enemy's line? To this objection there are two distinct answers. In the first place, the ships which composed the British fleet were not only of a very inferior order, dull sailors and very unmanageable, but were also very indifferently manned, and by no means calculated to perform with precision those evolutions which an expert tactician might have deemed expedient for the purpose of doubling on the enemy's line; and in the next place, as it appears by Lord Duncan's despatch, his principal object was to get between the entire of the enemy's fleet and the land, so as to prevent the possibility

of any part of them escaping to leeward. Had the admiral's intentions been strictly fulfilled, and had each ship of the British placed herself close alongside to leeward of her opponent in the line, thus following the example of their leaders, not a single ship of the Dutch would have escaped; whereas, it appears that the part of the enemy's fleet (namely, the centre,) which was not immediately attacked by either of the British admirals, escaped into port. Thus the maxim strictly holds, that the tactics alone of the chief in command can avail little in action, unless accompanied by promptitude and intrepidity in *all* concerned in the conflict.

THE NILE.—The next action, in point of time, is that of the Nile,—a battle not less important in its results than, at that period, novel in its nature, from the circumstance of its being the only general and decisive engagement, during the French revolutionary war, fought *at anchor*.

When the enemy were discovered in Aboukir Bay, Sir Horatio instantly directed his course towards them, and found them at anchor, in a line extending from N. W. to S. E. They were at single anchor, with springs on their cables, and riding head to wind, which was from N. W. To approach them, it was necessary to sail round an island, and a reef projecting from it,

to the distance of several miles from the point on which the small fort of Aboukir stands. The wind was perfectly fair; but, unfortunately, in rounding the reef, the *Culloden*, the leading ship, ran aground, and could not be got into action. "After this accident, Nelson found himself with ten ships only (three having fallen very much astern) to fight thirteen of the enemy, and several of these of superior force to any of his. The island also, fortified with mortars and some heavy guns, was to be passed; yet he determined on an immediate attack, and made the signal to attack the van and centre of the enemy. It was near six in the evening when he closed* with them. About half the ships got between the enemy and the shore, either by *cutting* through their line, or by sailing round the head of it; and the rest attacked on the outside. All dropped their anchors close in front† of their opponents: by this disposition, some of the French line were doubled on, and all that were engaged on the land side were taken unprepared. The *Zealous* fired three broadsides before a gun was returned from that *side*.‡ The enemy began firing as soon as our ships came within shot. The *Zealous* dismasted the *Guerriere* (French van ship) with three broadsides, and completely beat her in five minutes. The six headmost

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* The action was fought August 1st, 1798.

† It is to be presumed, that those of the British ships which took up positions abreast of their opponents, anchored by the stern.

‡ This explanation is very defective. Sir Samuel Hood means, before a gun was fired from the landward or larboard side of the ship opposed or alongside of the *Zealous*.

ships were taken possession of the first night, and the *L'Orient* blew up."

The position of defence occupied by the French had been deemed previously impregnable by their chief. It was not until too late that he perceived the error he had committed, in exposing his *van* to so formidable an attack, without its being able to receive any timely support from his rear.* It is true, some of the ships had taken the precaution to put "springs on their cables;" but in all probability, from the acuteness of their angles, they became totally useless. But Nelson left nothing unprovided for. His superior skill consisted, not so much in *forcing* the enemy to fight,—which they, being at anchor, and "embayed," could not avoid, if he chose to break in amongst them,—but in bringing his force to bear principally upon their van and centre. Had he indiscriminately made a general attack on the whole French line, the pro-

* Napoleon, speaking of the "*Battle of Aboukir*," asserts, that "had Villeneuve weighed and supported the van of the French squadron, he would have *decided* the action." Buonaparte appears not to have taken into account the direction of the wind, which was "*dead-on-end*." No allusion is made to the circumstance of *Villeneuve*, after cutting his cables on the following afternoon, forgetting to *decide* the day.—Villeneuve, in fact, decided in favour of *flight*.

babilities are, that the results of the victory would not have been so decisive, and that, in an over-anxiety by this means to render the capture of the whole certain, a greater number might have escaped.

The BATTLE OF TRAFALGAR, though it stands on the highest pinnacle of fame as to its results, still continues to be a theme for tactical discussion. Some of the ablest of the contributors to Admiral Ekins's work have expressed themselves in terms very decidedly at variance with each other on the tactics of our immortal hero at Trafalgar, more particularly as to his mode of bringing his fleet into action.

ANONYMOUS REMARK.

"THE mode of attack adopted with such success in the Trafalgar action appears to me," says the writer, "to have succeeded—from the enthusiasm inspired throughout the British fleet, from their being commanded by their beloved Nelson; from the gallant conduct of the leaders of the two divisions; from the individual exertions of each ship after the attack commenced, and the superior practice of the guns in the English fleet.

"It was successful, also, from the consternation spread through the combined fleet, on finding the British so much stronger than was expected; from the astonishing and rapid destruction which followed

the attack of the leaders, witnessed by the whole of the hostile fleets—inspiring the one, and dispiriting the other; and from the loss of the admiral's ship early in the action.

"The disadvantages of this mode of attack, (alluding to the attack made by the British, formed in two columns, from to *windward*,) appear to consist in bringing forward the attacking force in a manner so leisurely and alternately, that an enemy of equal spirit and equal ability in seamanship and gunnery would have annihilated the ships one after another in detail, carried slowly on as they were by a heavy swell and light airs.

"At the distance of one mile, five ships, at half a cable's length apart, might direct their broadsides effectively against the head of the division for seven minutes, supposing the rate of sailing to have been four miles an hour; and, within the distance of half a mile, three ships would do the same for seven minutes more, before the attacking ship could fire a gun in her defence.

"It is to be observed, that, although the headmost ship does certainly, in a great measure, cover the hulls of those astern, yet great injury is done to the masts and yards of the whole, by the fire directed against the leader; and that, if these ships are foiled in their attempt to cut through the enemy's line, or to run on board of them, they are placed, for the most part, *hors de combat* for the rest of the action.

"Or should it fall calm, or the wind materially decrease about the moment of attack, the van ships must be sacrificed before the rear could possibly come to their assistance.

"In proceeding to the attack of the 21st of October, the weather was exactly such as might have caused this dilemma, as the sternmost ships of the British were six or seven miles distant. By the mode of attacking in detail, and the manner in which the combined fleet was drawn up to receive it, instead of doubling on the enemy, the British were, on that day, themselves doubled and trebled on; and the advantage of applying an overwhelming force collectively, it would seem, was totally lost.

"The 'Victory,' 'Temeraire,' 'Sovereign,' 'Belleisle,' 'Mars,' 'Collossus,' and 'Bellerophon,' were placed in such situations on the onset, that nothing but the most heroic gallantry and practical skill at their guns could have extricated them. If the enemy's vessels had closed up, as they ought to have done, from van to rear, and possessed a nearer equality in active courage," (aye, there's the rub!) "it is my opinion, that even British skill and British gallantry could not have availed. The position of the combined fleet, at one time, was precisely that in which the British were desirous of being placed, namely,—to have part of an opposing fleet doubled on, and separated from the main body."

After speaking of the passive gallantry displayed by the French admiral, with his little skill in manœuvring, the writer adds, "It may appear presumptuous thus to have questioned the propriety of the Trafalgar attack; but it is only just to point out the advantages of every means that may be used for the attainment of great results, that the probabilities and existing circumstances may be well weighed before such means are applied. A plan, to be entirely correct, must be

suited to all the cases. If its infallibility is not thus established, there can be no impropriety in pointing out the errors and dangers to which it is exposed, for the benefit of others." *

SECOND ANONYMOUS REMARK.

"In one principal thing," says the writer, "I must beg leave to differ from Mr. Clerk, who lays great stress on the preference to the *leeward* position; whereas I am fully persuaded that the *weather-gage* has advantages that must preponderate. The principal reasons I have to offer, in support of my opinion, are these:—By being to windward, you can always choose your distance of engaging, and there is nothing equal to close work; and if your enemy chooses his distance, I have always found him fond of long bowls, thereby crippling you, and then making off himself with his usual gasconade. But by bearing plump down, and passing through his line, and raking him as you do so, then pelting him close on his lee-side, you strike a panic into him that he cannot easily recover. Another material point, not unworthy of notice, is,—I have always observed, on boarding a captured ship, that their decks are never so clear as with us; consequently much confusion must ensue; as by this manœuvre they are in some degree taken by surprise, and the result of

* "Our heroic and lamented chief knew his means, and the power he had to deal with; he also knew the means he adopted were sufficient for the occasion, and that sufficed. The Trafalgar attack might be followed under different circumstances, and have a different result: it is right, therefore, to discuss its merits and demerits. It cannot take one atom from the fame of the departed hero, whose life was one continued scene of original ability, and of superior action."

confusion always proves fatal, particularly in great matters. I am borne out in this opinion by the events which were experienced in both Lord Nelson's actions, of the Nile and Cape Trafalgar. Had Lord Rodney pursued the same system, it is probable his victory would have been more splendid. I am willing to allow that many circumstances may occur, when it might not be altogether feasible to commence a battle in this way; but as there are numerous circumstances, such as light or variable winds, lee-shores, shoal water, &c., a commander-in-chief often has a choice of difficulties; and fortunate it will be for his country if he be so happy as to possess presence of mind to use and find resources as emergencies present themselves; for I know no subject which embraces a greater variety, in all its bearings, than that of sea-fights; and it may be a useful reflection to bear in mind, that all the achievements of the renowned Nelson were owing to the felicity he displayed in the manner of his attacks, which were always of a novel and unexpected kind."

The foregoing extracts may be thus answered:— If the ships of the British fleet bore up in a line abreast, they would equally be subject to injury done to the masts and yards of the whole, because each single ship would become a solitary object, upon which her immediate opponent in the enemy's line would particularly direct a *raking* fire. It appears to have escaped the notice of the writers of these "Remarks," that there was a third mode of attack, by

which a fleet from to windward might have brought to battle an enemy to *leeward*, as formed after the manner of the combined fleets of France and Spain. But with the light winds and swell on the 21st of October, and the relative positions of the hostile fleets, considerable time would have been lost had the method in question been adopted by the British fleet. The two lines in the order of sailing, as formed by Nelson, might, out of gun-shot, (the wind being west,) have kept steering in a S. E. direction until they had brought the rear or rather sternmost horn of the enemy's crescent to bear N. E., or in that position which tacticians would term the "point of impunity." In this manner an American fleet would probably have attacked its enemy; but the wind was neither sufficient in force or steadiness to trust to such speculative mode of attack.

To these observations are added the *remarks* contained in the "OFFICIAL MEMORANDUM" of the immortal Nelson:—"Something must be left to chance; nothing is sure in a sea-fight, above all others: shot will carry away the masts and yards of friends as well as foes; but I look with confidence to a victory before their van could succour

the rear. The second in command will, in all possible things, direct the movement of his line, by keeping them as compact as the nature of the circumstances will admit. Captains are to look to their particular line as their rallying point; *but in case signals can neither be seen nor be perfectly understood, no* captain can *do very wrong* if he places his ship *alongside* that of an *enemy* !"

FINIS.

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